

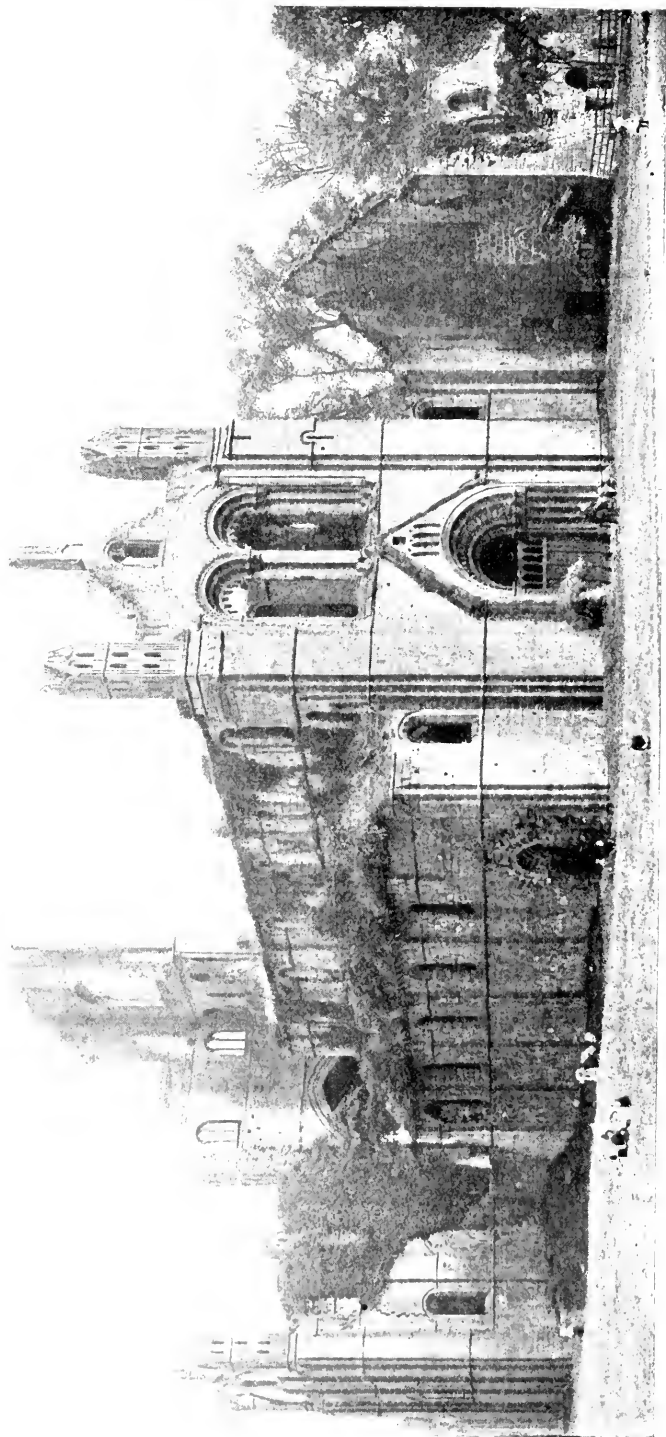
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Photographed by C. H. Bothamley.

Fig. 1. KIRKSTALL ABBEY CHURCH, FROM THE NORTH-WEST (before the recent repairs).

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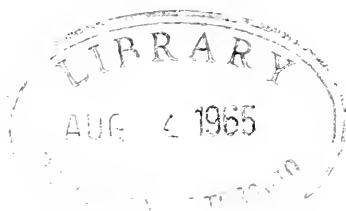
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ARCHITECTURAL DESCRIPTION
OF
KIRKSTALL ABBEY,

BY

W. H. ST. JOHN HOPE, M.A.,
Assistant Secretary of the Society of Antiquaries,

AND

JOHN BILSON, F.S.A.,
Membre du Comité d' honneur de la Société
française d' archéologie.

Privately printed for the Thoresby Society.
LEEDS, 1907.
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INTRODUCTION.

In issuing to members of the Thoresby Society this, the sixteenth volume of the Society's Publications, the Council brings to its completion a work which has involved a large amount of labour and research on the part of its co-authors, Mr. W. H. St. John Hope, M.A., and Mr. John Bilson, F.S.A., and which summarizes the matured opinions of these two gentlemen. It is confidently believed that this volume will be the standard work on the architecture not only of Kirkstall Abbey, but of early Cistercian monastic buildings generally.

The plan of the book, which consists of two separate papers, for which Mr. Hope and Mr. Bilson are severally responsible, is justified by a twofold consideration. Firstly that our two authors, each of unchallenged eminence both in archæology and in conventual architecture, have approached the subject from different points of view. Mr. Hope's paper, beginning with a brief sketch of the History of the Abbey from its foundation by Henry de Lacy down to the present day, is devoted mainly to a detailed description of its architecture, showing how it grew from the "humble offices" which were sufficient for the little pioneer company of monks from Fountains in 1152 to the magnificent pile which was surrendered to King Henry in 1539. The readers' intelligent interest in this survey will be, chronologically, greatly strengthened by a study of the excellent coloured plan of the Abbey buildings which has been provided, in which the different colours represent the various periods.

Mr. Bilson approaches his subject from a different side, and with a wider outlook, treating the Abbey as one member of a great family, noting differences from and resemblances to other examples to be found elsewhere. To Mr. Hope the Abbey is *the* Abbey, an isolated

building, self-contained, the work merely of its successive architects ; to Mr. Bilson it is *an* Abbey, one of the great Cistercian group, the evolved product of a system. One may say that Mr. Hope's treatment is objective. Mr. Bilson's subjective. And it is perhaps no disadvantage from the point of view of the reader when in the two papers these differing treatments overlap, and the same thing is presented from two points of view.

A feature of the volume which honourably distinguishes it from most of its predecessors, is the number and (if the Council may be allowed to say so) the excellence of the illustrations. For a few of these the joint authors are responsible, but the Council has also to acknowledge much invaluable help from other sources. The large ground plan of the Abbey, originally drawn for the Society by a local architect, has been corrected in places by Mr. Hope and Mr. Harold Brakspear, with the kind help of Mr. Thos. Neilson, and Mr. E. Kitson Clark, F.S.A. To Mr. Godfrey Bingley's well-known skill the Council is indebted for a large number of photographs, and also for the preparation of the index ; as also to Mr. C. H. Bothamley, Mr. A. Dawson Berry, Mr. Thomas Gascoigne, Mr. H. Wormald, Mr. C. H. Allanson, Mr. Isaac Howe, Mr. J. H. Radcliffe, and Mr. C. R. H. Pickard. The Council is also indebted to Messrs. Frith, Mr. Joseph Wormald, and Mr. J. V. Saunders for permission to reproduce certain photographs, and to MM. Philippe des Forts, and C. Enlart for similar permission in the case of figs. 57, 58, and 59 (Fontenay) and 73 (Pontigny) ; and to the British Archæological Association for the like in the case of Mr. J. T. Irvine's drawing (fig. 81).

It is intended to print a bibliography of the abbey in a future number of the *Miscellanea* of the Society.

B.P.S.

September, 1908.

CONTENTS.

KIRKSTALL ABBEY

BY W. H. ST. JOHN HOPE, M.A.

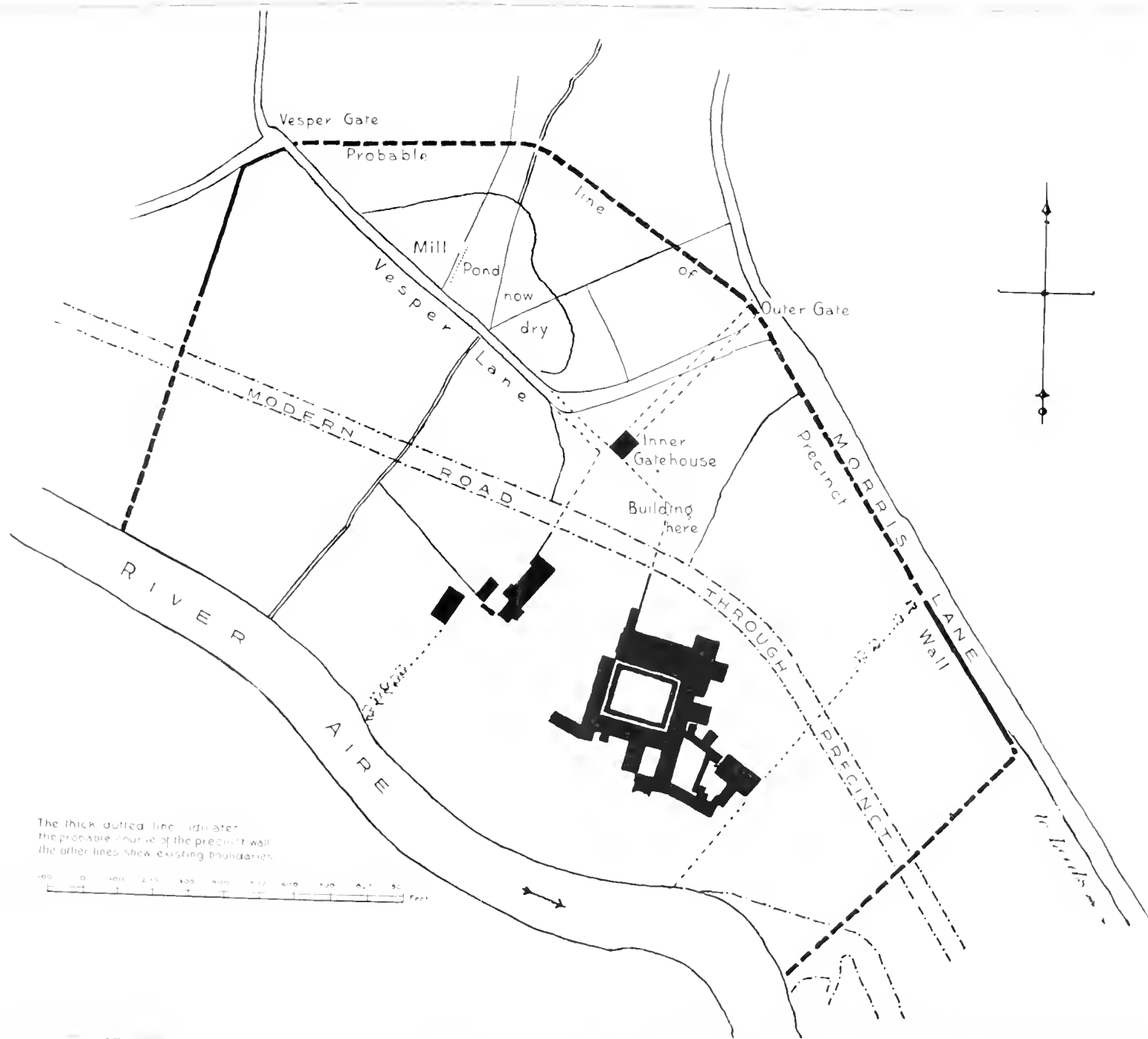
	PAGES
Introduction	I
General History	I
The Precinct	8
The Great Gatehouse	10
The Church	10
The Cloister	27
The Chapter House	29
The Parlour	30
The Dorter	30
The Rere-Dorter	32
The Dorter Sub-Vault	32
The Abbot's Lodging	34
The Infirmary	38
The Warming House	43
The Frater and Misericord	46
The Meat Kitchen	49
The Old Kitchen	50
The First Frater	51
The Cellarer's Building	54
The Rere-Dorter of the Lay-Brothers	59
The Guest House	60
Report on the Preservation of the Ruins of Kirkstall Abbey by W. H. St. John Hope, M.A.	64

THE ARCHITECTURE OF THE CHURCH OF KIRKSTALL ABBEY.

BY JOHN BILSON, F.S.A.

	PAGES
Introduction	73
Plan	84
General Design and Structure	101
Details	124
Arches	133
Bases	126
Capitals	127
Corbel Supports	125
Doorways	133
Eaves Corbels	138
Hoods	137
Piers	124
Plinths	137
Strings	137
Windows.. .. .	137
Conclusion	138

Index	141-6
List of Illustrations	147-9
Introduction	v., vi.



Based on the Ordnance Survey.

Fig. 2. Kirkstall Abbey.

Plan of the Precinct.

Kirkstall Abbey.

By W. H. ST. JOHN HOPE, M.A.

INTRODUCTION.

Despite their nearness to the busy City of Leeds, and the almost perpetual pall of smoke in which they are daily enveloped, the ruins of Kirkstall Abbey deserve more attention than they have hitherto received at the hands of antiquaries.

Even in a county that also contains the mother house of Fountains, and such sisters as Rievaulx and Byland, Jervaulx, Selby, and Roche, the remains of Kirkstall Abbey, from their extent and preservation, and the completeness with which they illustrate the characteristic architecture and arrangements of a Cistercian monastery, stand second in importance only to those of Fountains ; while recent judicious clearances have made them favourable subjects for study.

So much has been written about the history of Kirkstall Abbey by Thoresby, Burton, Whitaker, and other local historians, as well as by Dugdale and his continuator Stevens, that even the industrious editors of the latest edition of the *Monasticon Anglicanum* have to confess that "little additional matter of importance can be expected from them."

To this mass of literature the Thoresby Society has lately added a printed edition of the Coucher Book of the Abbey, and a number of useful memoranda of more or less local interest.

GENERAL HISTORY.

Almost the whole of the matter that has been printed about Kirkstall Abbey has reference to its landed possessions only, but it fortunately includes two versions of the history of its foundation which have an important bearing upon the subject-matter of the present paper.

The earlier of these accounts is contained in a chronicle of Fountains Abbey, dictated by Serlo, one of the first monks of the mother house, to Hugh, a monk of Kirkstall, about the year 1207¹, and may be translated as follows :

1. This chronicle was edited for the Surtees Society by the late Mr. J. R. Walbran, and published in 1863, in the first volume (xlii) of *Memorials of the Abbey of St. Mary of Fountains*.

In the year of the Incarnation of the Lord 1147 a certain noble man in the territory of York, Henry de Lacy by name, undertakes to build a monastery of the Cistercian Order. He assigns a place, he erects the monastery, and there is sent to him a convent of monks under an Abbot Alexander. This Alexander was one of our first fathers, uterine brother of Dan Richard, the second abbot of Fountains, who (as has been said) rested in peace at Clairvaux. Among these brethren, I, Serlo, was sent forth, a man now decrepid, as you see, and worn out with old age. The place of our dwelling was at first called Bernolfwic, which we, having changed the name, call St. Mary's Mount. We stayed there some years, suffering many discomforts of hunger and cold, partly by reason of the inclemency of the air and the immoderate plague of waters, partly because, the kingdom being disturbed, robbers many times wasted our goods. The place of our dwelling was therefore displeasing to us, and the abbey was reduced to a grange. By the advice of our patron we moved to another place which is now called Kirkstall. In the 15th year of the foundation of the monastery of Fountains, on the 14th of the Kalends of June [19th May] we were sent out under Abbot Alexander, twelve monks and ten lay-brothers.¹

The later account of the foundation is preserved in a manuscript of the early part of the fifteenth century, by an anonymous compiler, now in the Bodleian Library at Oxford.² Part of the text may be found in the various editions of the *Monasticon Anglicanum*, but the whole has lately been printed, with a translation, by Mr. E. Kitson Clark, F.S.A., in the publications of the Thoresby Society.³

Though the later account contains nothing inconsistent with the former, it extends to far greater length, and contains many more particulars than those given to Hugh by the aged Serlo.

According to the writer, the Abbey was founded by Henry de Lacy in fulfilment of a vow, that on his recovery from a severe illness he would build an abbey of the Cistercian Order in honour of the glorious Virgin and Mother of God, Mary. He accordingly communicated his intention to the Abbot of Fountains and assigned to him the vill of Barnoldswick for the construction of an abbey. The abbot having accepted the gift and sent brethren to Barnoldswick, he built humble offices according to the form of the Order (*officinas humiles erexit secundum formam ordinis*) and gave the place the new name of St. Mary's Mount. The offices having been arranged according to custom (*officinis igitur de more dispositis*), there went forth to the new monastery from the mother house of Fountains, on 19th May, 1147,

1. *Op. cit.* 90-93. 2, Laud MS. Misc. 722, ff. 129-138. 3. Vol. iv. (1895) *Miscellanea*, 169-208.

Dan Alexander, prior of Fountains, who was ordained abbot, with twelve monks and ten lay-brothers.

The new convent remained at Barnoldswick for six years and more in unbroken poverty and lack of food and clothing, with the further discomfort of immoderate rains and the loss of their goods by raiders. Seeing therefore that the place of their settlement was little fit for building a monastery, the abbot began to turn over in his mind the desirability of changing its site, and moving the abbey elsewhere. While passing through Airedale on the business of his house he found a pleasant part of the valley inhabited by a number of hermits, who were eventually induced to give up the place of their habitation as a site for the new abbey. Through the intervention of Henry de Lacy, the lord of the place, William of Poitou, granted the site to the monks, and Abbot Alexander, having assured himself of a place more suitable than Barnoldswick, erected a church (*basilica*) there in honour of the mother of God, the ever-virgin Mary, and having arranged humble offices according to order (*dispositis ex ordine humilibus officinis*), he changed its name and called his monastery Kirkstall.

The date of the removal from Barnoldswick is given as the 14th of the kalends of June (19th May), 1152.

The site is described as covered with woods and unproductive of crops, a place well nigh destitute of good things, save timber and stone, and a pleasant valley with the river Aire flowing through the middle of it. The site was on the north side of the stream.

By the industry of the monks, space was soon cleared for the new buildings, while the convent itself was increased in the number of brethren and the tale of its possessions. "For the abbot, being a man of piety and prudence, watched with unwearying sagacity over the progress of his house in every direction, and increased it as far as possible with just claims. And throughout, Henry de Lacy, the founder of the monastery, stood by him, now providing the fruits of harvest, now supplying money as the needs of the establishment required. He had part in providing the buildings, laid with his own hand the foundations of the church, and himself completed the whole fabric at his own cost."¹

The date of Henry de Lacy's death is uncertain, but he apparently survived Abbot Alexander, who, after ruling the house for thirty-five years, died in 1182. In his days, "the buildings of Kirkstall were erected of stone and wood brought there, that is, the church and both dorters, to wit, of the monks and of the lay-brothers, both their fraters,

1. "Ipse edificiis providendis interfuit, ipse manu sua ecclesie fundamenta jecit, ipse totam ecclesie fabricam impensis propriis consummavit."

the cloister, the chapter house, and other offices necessary within the abbey, and all these were covered excellently with tiles."¹

The documentary history of the buildings of the abbey is confined to this single statement that between the removal from Barnoldswick in 1152, and the death of the first abbot, Alexander, in 1182, the church, the cloister, and the eastern, western, and southern ranges of buildings, had been built of stone and wood, and covered with tiles.

Works that were spread over the greater part of thirty years, even if carried on continuously, are not likely to show close uniformity of treatment, and it is easy from a careful examination of the buildings to find differences which indicate clearly the order in which they were built.

The earliest building was evidently the *cellarium*, and of course the reredorter that formed a necessary part of it. The square edged openings, the curious panelling of the outer walls by the arching over of the interspaces of the pilaster buttresses, and the general simplicity of detail are all indicative of its early date; and it has not hitherto been noticed that the building is complete in itself, and has been carried up independently of whatever was subsequently built up to it. Thus the church at one end and the arches at the other end alike abut against it with straight joints. A precisely similar state of things has lately been found to exist with regard to the *cellarium* at Jervaulx, and the object in both cases was evidently the same, to provide, as early as possible, a convenient lodging for the lay-brothers, so that they might help in the building of the church and other offices.

Of very little, if any, later date than the *cellarium* at Kirkstall is the eastern range, together with the south end of the transept, against which its roof abutted, but the range of arches which includes the entrances to the chapter-house and parlour is a later insertion. The building of the eastern range provided early accommodation for the monks, whose dorter formed the upper story.

The southern range, which contained the monks' frater and the kitchen, must have been carried up simultaneously with the dorter range, for although it would have been possible to use the subvault of the latter as a frater, pending the completion of the frater itself, the kitchen would have been wanted early to serve the frater of the lay brothers in the southern part of the *cellarium*.

The presbytery of the church also belongs to the earliest buildings, but the arch opening into it from the crossing, and of course its vault, belong to the next stage of the work, which also included the eastern side of the transepts.

1. "In diebus illis erecta sunt edificia de Kirkestal ex lapide et lignis delatis, ecclesia videlicet et utrumque dormitorium monachorum scilicet et conversorum utrumque et refectorium claustrum et capitulum et alie officine infra abbaciam necessarie et hec omnia tegulis optime cooperta."

This stage was followed by the completion of the transepts and the building of the chapels east of them, and the gradual carrying up of the nave. The existing work of the chapter-house also belongs to this time; also the alteration of the monks' frater and kitchen, and the inner or great gatehouse.

All these works were done during Alexander's abbacy, as already recorded. They of course included alleys round the cloister, but of these nothing is left standing.

The next buildings in point of date, the infirmary hall with the chapel block to the south, and the guest-house west of the church, were not erected until about 1220. Following close upon them came the rebuilding of the eastern part of the chapter-house, and the insertion of the lavatory and other small works in the cloister. Later still came the building of the abbot's lodging and of the galleries connecting it and the infirmary with the cloister; likewise the alterations in and additions to the guest-house.

The only works that can definitely be assigned to the fourteenth century are certain important alterations in connexion with the infirmary and the building of the structure south of it.

During the fifteenth century further changes, not all of one date, were made in and about the infirmary, while the frater was divided into two halls, and a new meat kitchen built on to its south-east corner. Considerable alterations were also made in the church, including the lowering of the roofs and the remodelling of the gables, the insertion of a large east window in the presbytery and of other windows in the transept chapels and nave. Later on came the raising of the old steeple by the addition of a new belfry, the extension and reconstruction of the cloister, and a few unimportant works round the infirmary and elsewhere.

The effect of all these changes was to make but little alteration in the original plan and arrangement of the buildings, which thus continue to illustrate the early Cistercian laying out in a very complete manner.

Of the later history of the buildings nothing whatever has been recorded.

The Abbey was surrendered by the abbot and convent on 22nd November, 31 Henry VIII. (1539), and pensions were assigned the same day to John Browne, the prior, and thirty other monks;¹ the abbot apparently was otherwise provided for.

Three years later, on 7th June, 34 Henry VIII. (1542), the site of the late monastery of Kirkstall and all its possessions, as well as the site, etc. of Arthington Priory and divers other monastic lands,

1. Letters and Papers, Foreign and Domestic (1539), xiv. ii. No. 567.

“except the bells belonging to the said monasteries of Kirkstall and Arthington,” were granted, in exchange for certain lands ceded by him to the King,¹ to Thomas Cranmer, archbishop of Canterbury, who settled the property in trust for his son, Thomas Cranmer. On this point, and the further descent of the site, Mr. W. T. Lancaster, F.S.A., has favoured me with the following notes :

“Archbishop Cranmer by deed dated the 10th June, 1551, conveyed to John Sandford and Peter Hayman the site and demesne lands of Kirkstall Abbey, to be held on the following trusts : to the use of himself for his life, and of his executors for a term of twenty years after his death ; then to the use of his son Thomas Cranmer and the heirs of his body ; in default of such heirs to the other heirs of the Archbishop.

Upon the attainder of the Archbishop the Crown resumed possession of the property, and on the 4th June, 1557, leased it to John Gawyn and Reginald Wolfe. Queen Elizabeth soon after her accession, upon the petition of Thomas Cranmer, the Archbishop's son, granted to him the benefit of the rent reserved under this lease.² At a later date this Thomas Cranmer (who was restored in blood in 1563) appears to have instituted proceedings to fix his rights under his father's settlement, and after a long suit and much expense he obtained in 1571 a verdict completely in his favour. The Court of Common Pleas adjudged that the term of twenty years fixed by the Archbishop's deed, as above, was altogether ineffective, and that Thomas had in fact been entitled to the property immediately on the death of his father. But, notwithstanding this decision, we find the Crown in October, 1581, granting the site and demesne lands of Kirkstall (*inter alia*) to Edmund Downing and Peter Ashton, by arrangement with Sir Henry Darcy in exchange for the site and manor of Salley ceded by him to the Queen.³ Downing and Ashton almost immediately, on the 20th January, 1582, conveyed their rights in the property to Edward Browne and Robert Walter, for the ultimate benefit of Sir Thomas Cecil, son of the great Lord Burghley ; and a year later we find that Cecil had also acquired Cranmer's rights, a fine being passed in Easter term, 1583, between Sir Thomas Cecil and William Camock as plaintiffs, and Thomas Cranmer and Katherine, his wife, as deforciant, respecting the site and demesne lands of Kirkstall which the deforciant recognised to be the property of Sir Thomas, the consideration being stated at £1,000.

Sir Thomas Cecil did not retain the site long, as it was sold in 1583 or 1584, with other lands, to Sir Robert Savile, an illegitimate

1. Patent Roll 34 Henry VIII. part 6, m. 19.

2. Patent Roll 2 Eliz. part 12, m. 15.

3. Patent Roll 23 Eliz. part 1, m. 17.

son of Sir Henry Savile, of Thornhill. The exact date is uncertain, but the transaction must have taken place before Michaelmas term, 1584, when a fine was levied by which the site, with the manors of Kirkstall, Headingley, Bramley, and Armley, with other property, were conveyed by Sir Robert Savile to Francis Bosvile and John Dighton junior, no doubt in trust under some settlement. Thenceforward the site remained the property of the Savile family until the death without issue of James Savile, Earl of Sussex, in 1671, when his sister Frances, wife of Francis Brudenell son of the second and father of the third Earl of Cardigan, brought it to the Brudenells, with whom it remained until the sale to Colonel North."

Except that the buildings were unroofed at the Suppression, and dismantled of everything that could readily be turned into money, they were not pulled down or otherwise injured, and, until the partial collapse of the steeple in 1779, the church and most of the buildings round the cloister remained structurally complete. The western range is shewn as roofed in Thoresby's engraving published in 1715, and was still intact as regards its walls in 1735 (until 1746, says Wardle) though ruined when Burton published his plan in 1758; while the eastern range yet retains all its vaults save that beneath the southern part of the dormer, which survived until 1825.

The abbey was purchased by the late Colonel North in 1890 and formally transferred by him by deed of gift to the Corporation of Leeds.

Shortly after its acquisition by the Corporation, the writer was invited to report as to the work required to be done for the preservation of the ruins. A meeting was accordingly arranged to discuss matters on the spot, and early in 1890, the report which is printed as the appendix to this paper was submitted to the Corporation and approved.

One of the first acts of the new owners on obtaining possession was to carry out the recommendation to free the ruins from ivy and other destructive vegetation, and to remove carefully the many large elm trees which not only encumbered the buildings, but were a constant source of danger. Some judicious excavations were also made under the writer's superintendence, and resulted in several interesting discoveries.

As a good deal of the other work recommended could only be done properly under the guidance of an architect, the ruins were later on placed under the charge of the late Mr. J. T. Micklethwaite, F.S.A., with the late Mr. J. T. Irvine as clerk of the works.

The operations necessary for the conservation of the abbey extended over several years, and although there may be differences of opinion as to the means adapted, there can be no doubt that they

will be effectual in arresting any serious damage for a long time to come. The visible results, however, can not be said in all cases to be satisfactory or picturesque, and in view of the strong criticisms which have been made against them, the writer thinks it fair to state, in justice to himself, that beyond furnishing the initial report, he was not at any time or in any way consulted, or invited to express any further opinion upon the work, by the Corporation. For all that has been done, except as regards the treatment of the abbot's house, and the laying out of the grounds, Mr. Micklethwaite is solely responsible.

THE PRECINCT.

The abbey precinct is on the north side of the river Aire, which forms its southern boundary and was apparently roughly oval in form and enclosed by a stone wall on the east, north, and west (see plan, fig. 2).

This boundary wall probably began on the east on the river bank, about the middle of the base of the existing modern weir, and ascended north-eastwards as far as a road from Leeds, now called Morris Lane. It then followed the road for about 1,000 feet in a straight line to a point where once stood the outer gate of the abbey, but of this no remains exist above ground. Beyond the gate the road curved round to the north, but the boundary wall, though it has been removed, seems to have gone on with a slight change of direction, marked by a hedge, for another 500 feet, where a stream called Hell Hole Gill, now covered in, entered the precinct. Its further course for the next 500 feet or so is indicated by a ridge running in a nearly straight line to a position called Vesper Gate on the Ordnance Survey map. From Vesper Gate, of which some remains exist,¹ a section of the wall runs south-west for 100 feet and then turns southwards for 300 feet, when it is broken off, but it seems to have gone straight on down to the river. The area thus enclosed is about 40 acres, and measures roughly 2,000 feet from east to west and 1,200 feet from north to south.

From the outer gate a lane ran south-eastwards for 350 feet to the inner gatehouse. This lane is now represented by a later road a little further west, which joins what is probably an old lane running westwards to Vesper Gate and now called Vesper Lane.² To the north of this lane and within the line of the precinct wall is a large depression which represents the abbey mill pool, while Vesper Lane traverses the crest of its dam. It was fed by the little stream called Hell Hole Gill, but is now dry. The sites of the mills are apparently unknown.

1. The northernmost pier of the gate seems to be late twelfth century. The southern pier has been rebuilt, apparently to widen the road. The gate originally was probably but a postern.

2. Beyond Vesper Gate this lane continued as the road to Kirkstall Forge.

Mr. W. T. Lancaster has been good enough to favour me with his views as to the bounds of the abbey precinct, which agree exactly with what I have already written above. He goes on to say: "As regards Vesper Gate, the pillar at the north side appears to be ancient, but the south pillar is a subsequent construction. This gate was no doubt required for access to a footpath or perhaps bridle road which ran through Hawksworth wood to Horsforth Woodside, and also perhaps to a road to the Forge. The main road, now called Spen Lane, turned to the north at the principal entrance to the precincts, and formed the high road to Horsforth, a great part of which belonged to the monks, and it also led to their manors of Cookridge and Adel.

Wardell mentions what he believed to have been the mill race for the mills adjacent to the abbey; this stream diverges from Oil Mill Beck in Hawksworth wood, and passing under the new road to Horsforth, runs to a point above the Forge, whence it descends into the river, being, I believe, still utilised by the Forge proprietors. From the point where it bends to the river, Wardell considered that it could be traced nearly to the Vesper Gate. There are some remains of a dyke on the north side of the road, notably near the Vesper Inn and behind Mr. Gott's house, but whether they are what Wardell supposed them to be is doubtful. As there was a rivulet (known as Hell Hole Syke) running direct into what is thought to have been the abbey mill dam north of Vesper Lane, from the adjacent high ground, I cannot quite understand why the labour of constructing a second watercourse to the mills should have been undertaken."

Among the monastic surveys in the Public Record Office is the following description of the precinct of Kirkstall Abbey at its suppression¹:

Kyrkstall nuper Abbatia in Comi- tatu Ebor.	}	In Rentali ibidem renovato xxij ^{do} die Novem- bris anno regni Regis Henrici viij ⁱ xxxj ^{mi} con- tinetur sicut sequitur.
---	---	--

Scitus Dicti nuper Monasterii cum ortis pomariis
gardinis et Cimiterio et alijs Commoditatibus infra
precinctum ejusdem continentes inter se per estima-
cionem vj acras unum clausum prati vocatum brew-
house close continens per estimacionem vj. acras aliud
clausum prati vocatum Overkirke garth continens per
estimacionem v acras aliud clausum pasture
vocatam pentes close continens per estimacionem
dimidiam acram aliud clausum pasture a retro stabi-
lum ibidem vocatum Colman croftes continens per
estimacionem ij acras et duo Molendina aquatica
granatica infra scitum predictum valent per annum.

xxvjs. viijd.

1. Exchequer (Augmentation Office) Miscellaneous Book 401, f. 199.

According to this survey the precinct contained :

i. The monastic site proper, with its gardens, orchards, etc. and the cemetery	6	acres.
ii. A meadow called Brewhouse Close	6	„
iii. A meadow called Overkirk Garth	5	„
iv. A pasture called Pentes Close	$\frac{1}{2}$	„
v. A pasture called Colman Crofts, behind the stable. 2 ..	2	„
making a total of 19 $\frac{1}{2}$ acres, within which were two corn mills worked by water power.		

As is so often the case, it is impossible to identify or locate these divisions on a plan of the site, or to reconcile the dimensions, despite their being based on the same unit as now.

THE GREAT GATEHOUSE.

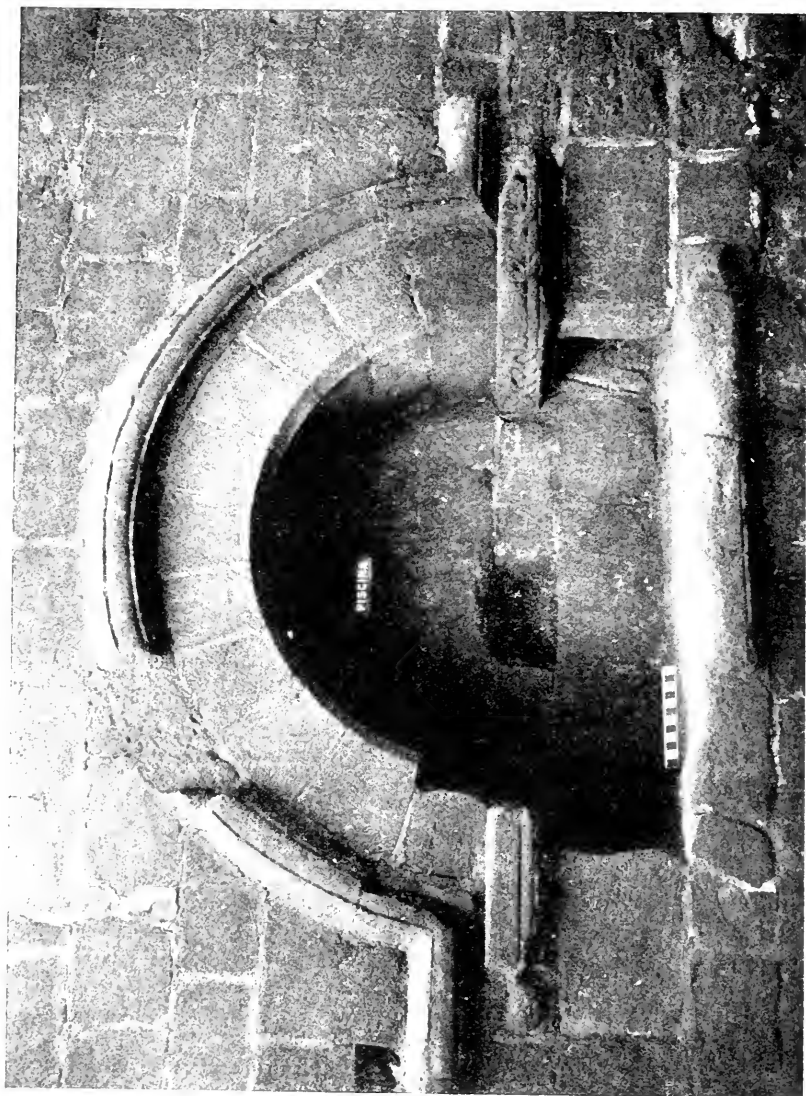
The inner or great gatehouse has fortunately been preserved through having been converted into a dwelling-house, and is an interesting structure of the second half of the twelfth century. It is 48 feet deep from north to south, and is traversed by the entrance passage, which is 19 feet wide and retains its ribbed vault. The passage has at the north end a wide semi-circular archway of three orders, the two outer of which are carried by jamb shafts. This is now closed by a modern wall, but opened into a spacious porch 26 feet deep, vaulted in two bays. The vault is carried by corbels in the side walls and corners. The south end of the gate porch is formed by a wall pierced with a wider doorway for vehicles and a narrower to the east for persons on foot. The latter is perfect, but the larger has been mutilated for modern insertions. To the south of the dividing wall is the gate hall, which is 13 feet deep, and vaulted in one bay. It opens into the outer court of the abbey by a wide archway like that at the north end of the passage (see large plan).

The gatehouse seems to have been flanked on both sides by buildings and to have had an upper story gained by a circular staircase at the south-west corner, but modern alterations have obliterated all but the vice and some attached fragments of the walls.

In the shrubbery to the south-east remains of buildings have been discovered, but it does not seem to have been thought necessary or advisable to plan them.

THE CHURCH.

The church at Kirkstall consists of an aisleless presbytery of two bays ; north and south transepts, each with three eastern chapels ; a nave and aisles of eight bays, with a north porch or galilee ; and a middle tower. As it is practically of one design throughout, it furnishes an excellent example of what may be called a Cistercian church of the



Photographed by Godfrey Bingley.

Fig. 3. Wall-drain south of high altar.

first type, which has suffered no alteration beyond the enlargement of some of its windows and the remodelling of its gables, and no addition save another story to the tower.

The presbytery is divided internally into two stages by a bold string course and vaulted in two oblong bays with a ribbed vault springing from corbels placed high up (fig. 56). The ribs have a simple soffit roll. The transverse ribs are pointed, and there are no wall-ribs. The original arrangement of the east wall has been obliterated by the insertion of a large late fifteenth century window, almost as wide as the presbytery itself. It has now lost all its tracery, but was of nine lights, with two transoms. The sill has been destroyed to enable a former road to pass through the church, and is now represented by modern masonry. The first bay has on each

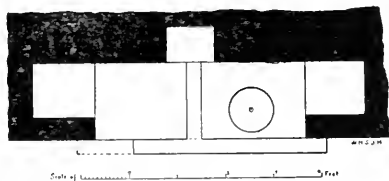


Fig. 4. Plan of wall-drain south of high altar.

side above the string course an original window, but west of these the upper part of the wall is plain. Below the string there is in the first bay on the south side, within a wide round-headed arch, a drain and a credence, with cupboards running into the wall at each end. In the back of the arch is a small square cavity, roughly made (fig. 3 and plan fig. 4).

The lintel on the west side of the arch is decorated with interlacing work (see fig. 3), but the eastern lintel is plain.

At 5 feet 10½ inches from the east wall the presbytery was crossed in later times by a low wall or reredos, 13 inches thick, in front of which stood the high altar. The wall itself has gone, but its line is easily fixed by the chase for it which has been cut through the sill and hood-mold of the recess just described, upon which it intruded somewhat awkwardly. The space behind the wall served as a vestry.

To the west of the first recess is another, which starts from the floor, consisting of a wide semi-circular arch, with side shafts carrying a bold roll moulding. Over this is a hood-mold decorated on both sides with short billets. This recess originally contained a stone bench and served as the sedilia. It is 9 feet 8¾ inches wide, 1 foot 7½ inches deep, and 7 feet 3 inches in height to the springing of the arch. In later times the bench was cut away and the recess lined with wood for a seat or seats. The holes and chases for this lining are very clear, and there are cuts through the outer arch which shew that it was canopied (fig. 5).

In line with the east jamb of the sedilia was a step across the presbytery.

Westward of the sedilia was a third recess, 18½ inches deep and 38½ inches wide, with a plain flat sill about three feet from the ground, within a round-headed arch with chamfered hood-mold. On the west side this hood-mold has been destroyed, but on the east it returns for a short distance along the wall (fig. 6). In later times the upper surface of this returned part has been cut down to form a narrow shelf, and a shallow pointed panel sunk in the wall behind with hollows for a pair of cruets to stand there. Attention was called to this curious feature some years ago¹ by Mr. J. T. Micklethwaite, who also showed that the recess itself formed the *ministerium* or credence table, where the chalice was made ready, and whence the bread and wine were carried to be offered at the high altar.

The north wall of the presbytery is quite plain, but at its western end there has been a large recess about 12 feet wide, perhaps for a tomb. The place of this is now neatly walled up.

On both sides of the presbytery, just within the entrance, and at 11 feet up, are the holes for the fixings of the veil that was hung between the quire and the high altar during Lent.

The presbytery arch is pointed and of one order only, carried on each side by a large round shaft starting from the floor. Between the arch and the westernmost cross rib of the presbytery vault is a narrow strip of pointed barrel vaulting. Just outside the arch were three steps which formed the *gradus presbyterii*.

The north and south arches of the crossing are also pointed, but are of three orders, carried by shafted piers of simple character.

The north transept has on the east side three pointed arches, opening into as many chapels (fig. 7). Over the arches is a band of plain walling up to a string course, above which are three plain windows. The north wall is divided into three stages (fig. 8). The lowest stage has in the middle a round-headed doorway from without; the second stage contains three round-headed windows; and the uppermost stage three more windows with, originally, a pointed oval window in the gable above. The west wall contains in the lower story two windows and a lately rebuilt pointed arch into the nave aisle, and in the upper story three more windows. Between all the windows is a string-course which is also carried over each as a hood-mold. In the north-west corner is a vice, which descends from the parapet to an opening in the jamb of the westernmost of the lower range of north windows. It seems to belong to an arrangement, perhaps like that in the corresponding part of the south transept, which was abandoned during the progress of the building. There

1. *Yorkshire Archaeological Journal*, x. 554.



Photographed by A. Dawson Berry.

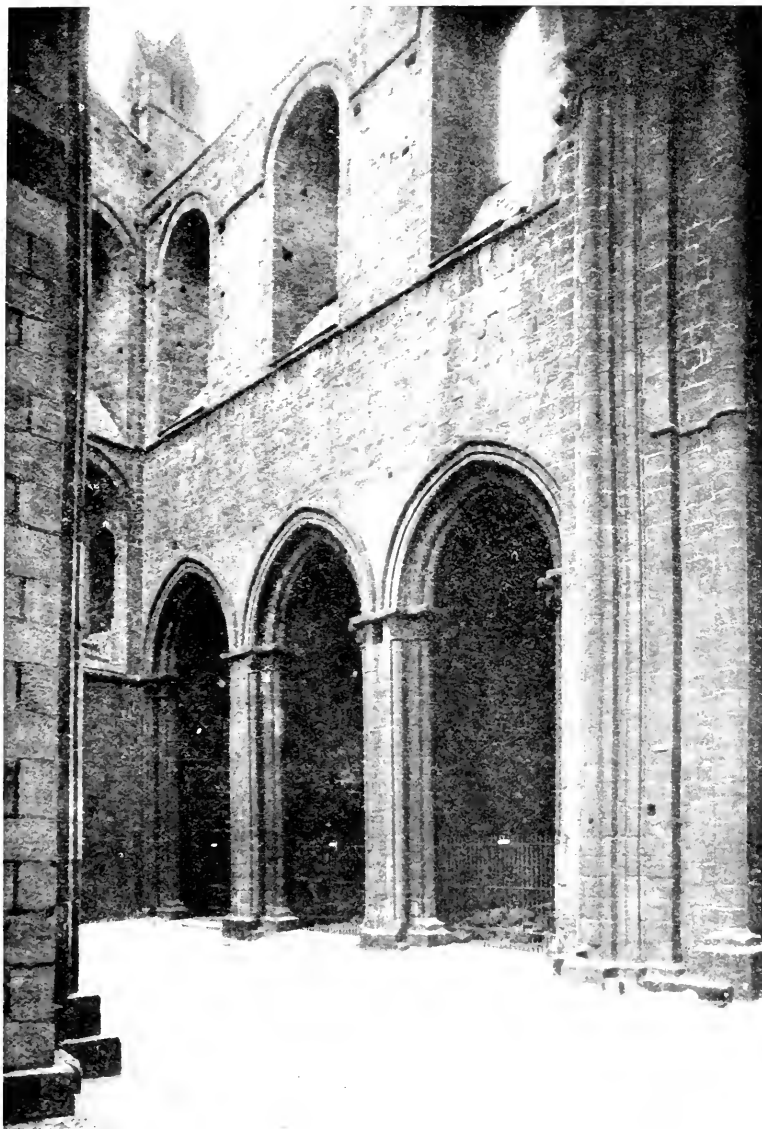
Fig. 5. Recess for the sedilia



Photographed by Godfrey Bingley.

Fig. 6. Credence in presbytery, with later recess for cruets.

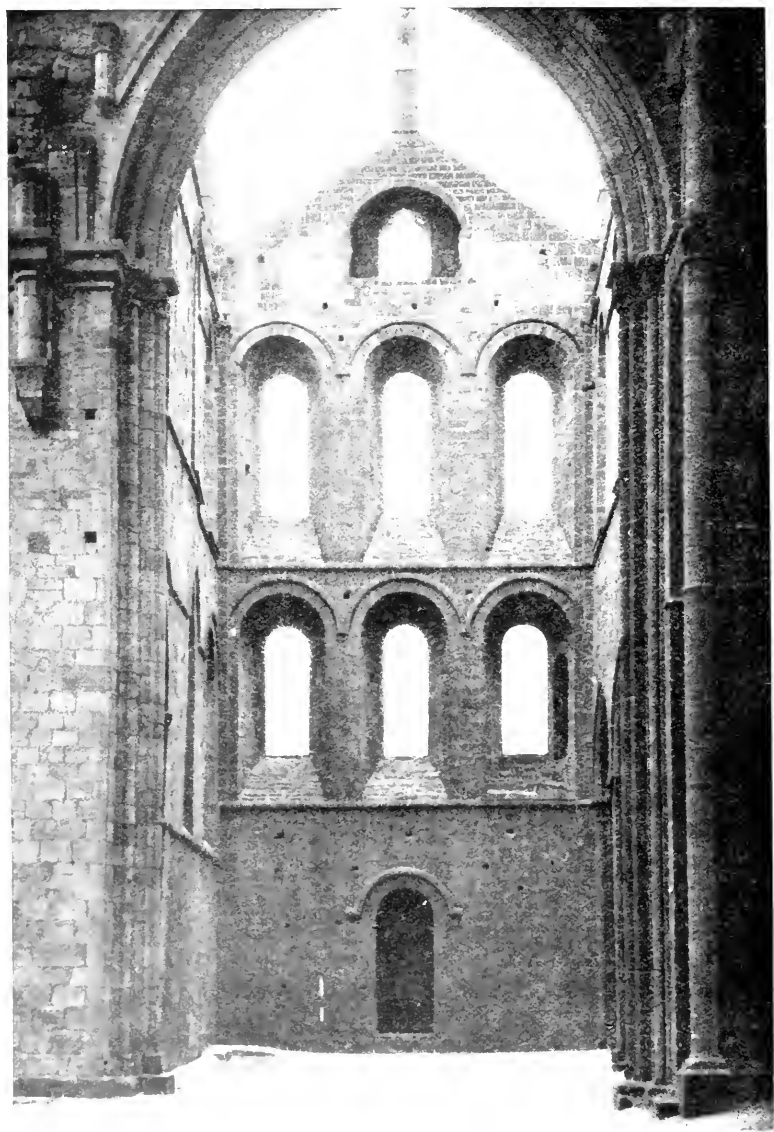




Photographed by Goltrey Bingley.

Fig. 7. East side of the interior of the north transept.





Photographed by Godfrey Bingley.

Fig. 8. Interior of the north transept, looking north.

are the remains in the north-west corner of the transept of a stone bench that once ran along the west and north walls.

The arches opening into the eastern chapels are each of two orders, carried by shafts with carved capitals. In the case of the arch next the presbytery the capital on the north side is carved with knot work (fig. 84), and in that of the northernmost arch the northern capital has a plaited astragal (fig. 82). The arches themselves were closed by screens, as may be seen from the cuts for fixing them. The chapels into which they opened were evidently only partly built at first, there being a marked joint indicative of a pause in all the side walls. The chapels have pointed barrel vaults and had each a pair of narrow round-headed windows in the east wall. These, however, have in every case been destroyed to make way for larger windows, which have been greatly ruined. In the northernmost chapel the window was of the fifteenth century, and apparently of three lights under a four-centred arch. In the middle chapel the window was of the fourteenth century under a dropped arch, and in that next the presbytery of the same date with a pointed arch; in both cases apparently of three lights. There are no remains of the altars or steps in any of the chapels, but each has in the south wall a wide arch containing a drain, with a square hole at the back, and a cupboard or recess running eastwards. To the west of this in the southern and middle chapels is a round-headed *ministerium*, but in the northern chapel the *ministerium* is in the north wall.

The eastern side of the south transept is arranged in the same way as the north, as are the chapels opening out of it (fig. 56). These have also had their eastern windows replaced by later ones of the fifteenth century with wide drop arches, but not all of one date. The present sills are modern, and all the tracery has disappeared. Each chapel has a drain in the south wall, but the *ministeria* to the west have in every case been destroyed and walled up. The arches into the chapels were closed by screens in front. Between the northern and middle chapels there was once an image on a pedestal with a canopy over, perhaps, as at Rievaulx, of St. Christopher, the sight of whom in early morning was supposed to insure beholders from sudden death that day. In the south jamb of the middle arch at 5 feet up are pin holes for affixing something.

The south wall has in the lowest stage, towards the east, a plain doorway with segmental head, which opened into the vestry. To the left of it, about 5 feet up, is a pin hole. In the west end of the same wall is the entrance into a vice up to the roofs. This was not, however, entered directly from the transept, but from a lobby or chamber about 7 feet square formed beneath the dorter stairs. This

chamber was covered by a half-barrel vault, the groove for which, in the west wall, has been a puzzle to many. Over the vice entrance is the dorter doorway, a plain round-headed opening 5 feet wide, with simple hood-mold (fig. 9). The space above, which in the east wall is occupied by a belt of plain ashlar, has here a wall gallery of six round-headed arches, carried by massive circular shafts with carved capitals (fig. 10). This had a doorway opening into it from the dorter, and the gallery itself gave access to a chamber over the transept chapels. The uppermost stage of the gable contains three large round-headed windows, with a pointed oval window above filled with later tracery.

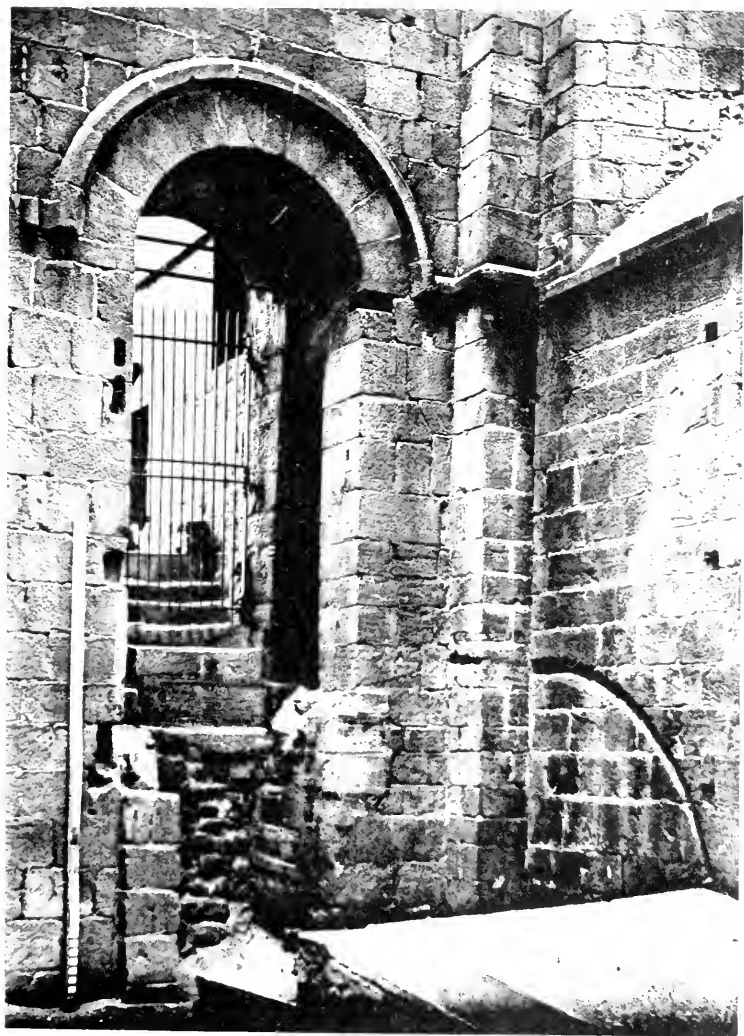
Against the west wall is the base, $8\frac{1}{2}$ feet wide, of the staircase by which the monks came down from the dorter to say their *vigiliæ*, or night offices. Its southern end is now interrupted through the destruction of the half-vault of the vice entry which carried the steps in front of the dorter doorway. All the other steps have of course also disappeared. Above the stairs are two round-headed windows, and north of them a pointed archway into the nave aisle. The uppermost stage has three clerestory windows like those opposite.¹

Both transepts apparently had flat wooden ceilings, and were not vaulted.

The space now occupied by the vestry and a book closet west of it entered from the cloister was first built as a barrel-vaulted passage 11 feet wide, with a broad archway at each end and a round-headed window on the east, for the convenience of the workmen during the building of the church (fig. 11). It was afterwards cut in two by a cross wall and the eastern arch walled up, to convert the eastern half into a vestry. This is $13\frac{1}{2}$ feet long, and is entered from the doorway in the transept. In the east end, beside the window already noted, there is a broad square-headed window in the blocking of the former arch. Within the arch is a recess for the altar, on the south are two square niches in the wall, and in the west end is a wide blocked recess.

The arch opening from the crossing into the nave was pointed like the other crossing arches, but of different section and of two orders. The inner order has a bold half-roll on the front and is carried on the south side by a short length of shafting corbelled off a little below the capital and there carved with bold knot-work. The outer order is square, with a bead along the edges, and springs from scalloped brackets which are a continuation of the capitals of the south arch of the crossing. The northern abutment of the arch was destroyed by the fall of the steeple, but has been rebuilt.

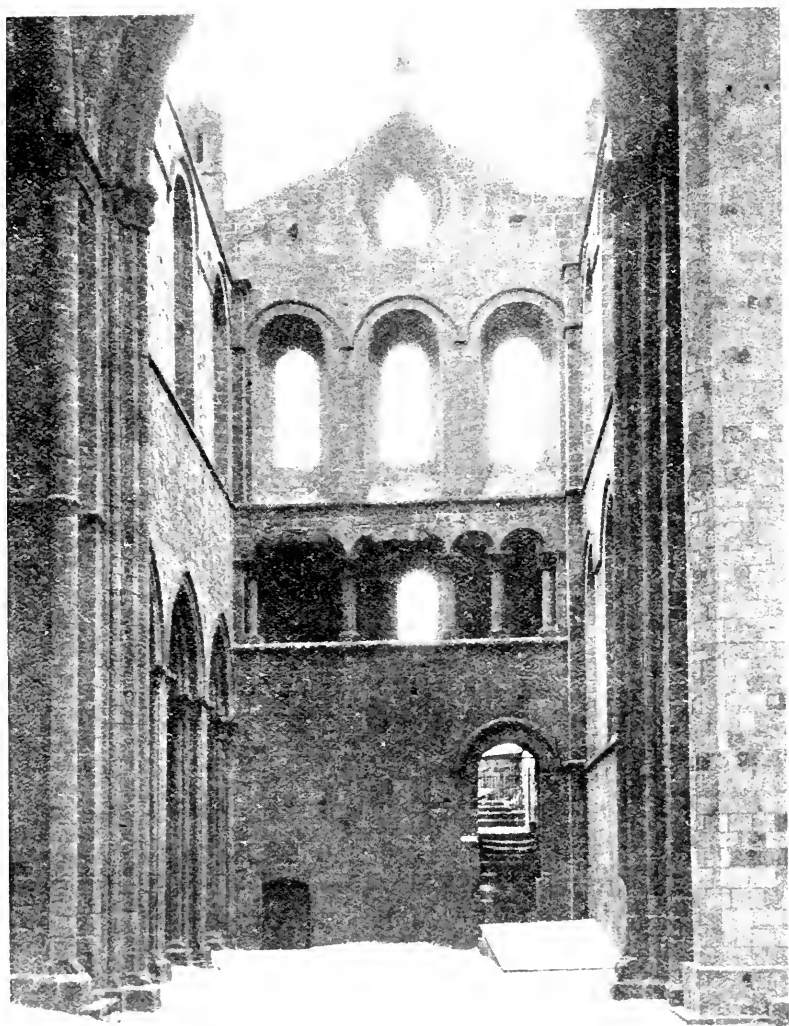
¹ The northernmost window has been walled up and the arch below underbuilt during the recent repairs, for the greater security of the remains of the tower.



Photographed by J. Gascoigne.

Fig. 9. Doorway in transept of night-stair from clouter.





Photographed by Godfrey Bingley

Fig. 10. Interior of the south transept, looking south.



Above the crossing was a low tower, in accordance with the Cistercian rule that "there be no stone nor wooden towers for the bells of immoderate height, which are unbecoming the simplicity of the Order."¹ This at Kirkstall originally did not rise much above the roofs (fig. 12). Just above the springing of the arches there is in each corner a short shaft like a vaulting corbel, but no vault has ever sprung from them. Over the eastern arch is a string-course and above it a belt of plain ashlar. This extends upwards to another string-course



Photographed by C. H. Bothamley.

Fig. 11. Exterior of east end of vestry.

above which are the windows, and under this is a row of corbels. These carried a floor, supported by diagonal struts from the short shafts below, as may be seen from the cuts for them in the string-course above the eastern arch (fig. 13). The stage above the floor contained on each side two round-headed windows, placed as far apart as possible so as to clear the roofs which rose between them; and in the middle of each side was a pointed doorway into the

1. "Turres lapideæ ad campanas non fiant nec lignee altitudinis immoderate quæ Ordinis dedecent simplicitatem." *Institutiones Capituli Generalis Cisterciensis 1240 et 1256*. Distinctio i. § ii. *Nomasticon Cisterciense* (ed. H. Sejalon, Solesmes, 1892), 287.

roofs.¹ The windows have jamb shafts externally, and apparently originally had a second or inner order, which has been cut away for the insertion of later tracery of three lights. The doorways between the windows are flanked by plain pilasters of some projection, and the angles are clasped by similar pilasters, but with bold circular shafts in the angles with scalloped capitals. Between the pilasters is a row of heavy corbels which with them carried probably a low pyramidal wooden spire covered with lead.

During the abbacy of William Marshall, from 1509 to 1527, the spire was taken down and the tower raised to twice its former height above the roofs (see fig. 20). This new addition was of two stages with slight buttresses at the angles bearing shields with the abbot's initials. The lower or belfry stage, which occupies three-fourths of the added height, had in each face a broad five-light window with traceried head within a segmental arch. None of the openings was cusped. The upper stage had in the middle of each side a small square window, cusped inside. Above was a second corbel table which carried the parapet. This parapet has entirely perished, but it evidently had large pinnacles at the angles² with two intermediate smaller ones on each side.

Internally the new upper story had a wooden floor supported on corbels below the belfry windows, while a second series of corbels above the windows carried another floor, which was lighted by the small square windows. This upper floor was reached by a vice in the south-west angle which began on the belfry floor and continued up to the parapet. The old tower could be entered only from the doorways opening into the roofs, and access to the belfry above must have been by a ladder (fig. 13).

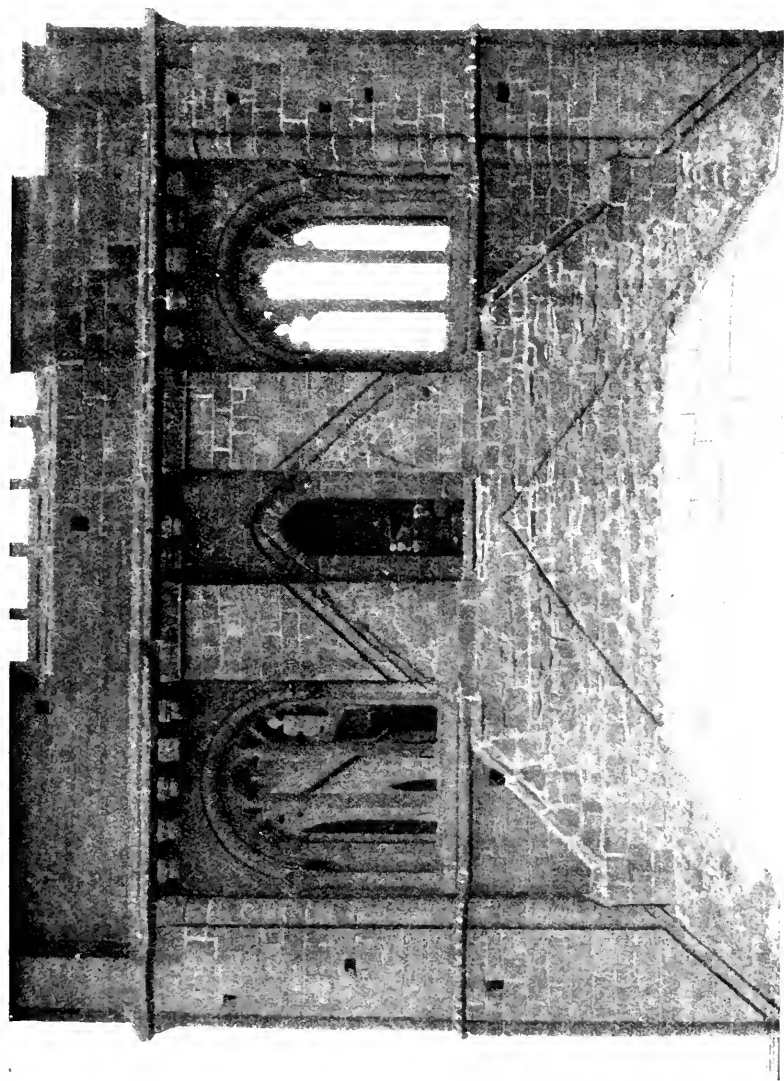
The addition of the new upper story to the tower, though a great gain architecturally, proved a disastrous one for the church, for there can be no doubt that its weight, which was not provided for by the first builders, eventually caused the collapse of the steeple in 1779³.

The nave is eight bays long, and at first sight seems to be of the same design throughout, but a careful examination reveals interesting differences in the sections and details of the pillars. These are all of massive character and formed of a number of shafts clustered within a circle (fig. 13). In the case of the eastern responds and the first five pillars the section shows eight large segmental members with as

1. These doorways seem all to have been walled up in later times.

2. In the engraving in Thoresby's *Ducatus Leodiensis*, published in 1715, the tower is shewn as perfect, with tracery in the windows and one of the pinnacles remaining on the north-west corner.

3. A like addition not long before to the middle tower of Fountains Abbey threatened very soon after its erection to cause a collapse there, and the total destruction of the presbytery was probably caused by its fall immediately before or after the Suppression. At Furness there is evidence of a similar raising of the tower and a threatening collapse, which was apparently averted by taking down the added story and beginning a new tower at the west end.



Photographed by Godfrey Hensley.

Fig. 12. East face of tower, showing limits of the Norman work and the line of the presbytery roof.





Photographed by F. Frith & Co. Limited.

Fig. 13. View looking eastwards up the church (before the late repairs).

many intermediate members of smaller size ; these latter, however, differ (see plans, fig. 75). Thus in the responds and the first three pillars they are alternately round and pointed ; in the fourth pillar all are pointed ; and in the fifth all are round. The base mouldings also differ ; the respond and the first pillar have a small roll between two larger ; the second pillar has three rolls of a size ; while all the other bases, including those of the western responds have a slightly hollow member between two rolls (see fig. 78). The capitals, including that of the fifth pillar, are all carved with variations of the scallop and have a square edged abacus. The sixth and seventh pillars and the western responds are composed of twelve shafts, consisting of four larger alternating with pairs of smaller ; but the latter are of two sizes, those flanking the large shafts facing east and west being 10 inches across, and the others 14 inches. The large shafts are 17 inches across (fig. 14). The capitals of these pillars differ from those east of them in having the abacus worked into a triple roll. The arches are all pointed and of three orders towards the nave. The innermost order has a bold half-roll, the second is chamfered, and the outermost has a three-quarter angle-roll with a chamfered hood-mold over. On the aisle side the arches are of two orders only on account of the vault. Above the arches is a plain belt of five courses of ashlar, surmounted by a string-course on which stand the clerestory windows. These are plain and round-headed, with a string-course running between them at the springing line and continued over each as a hood-mold.

The west end of the nave is of two stages (see fig. 69). The lower shows a blank expanse of walling pierced by the great doorway, which has a plainly moulded rear-arch. The wall is surmounted by the remains of a corbel table which carried the parapet of a narrow wall gallery across the church. At each end of this gallery is a semi-circular respond running up as high as the crowns of the clerestory windows, where it is finished off with a plain capital : these responds originally carried a round-headed arch (fig. 69). The outer wall contains two large round-headed windows, with remains of later tracery, enclosed by a four-centred relieving arch upon which stands a low gable. This now contains a fifteenth century window surmounted by a pinnacle, and flanked by two angle pinnacles, or rather turrets, of the same date. Originally, however, the two large windows had a much loftier gable over, no doubt pierced by a big round window. When the west gable and nave roof were lowered in later times, the arch towards the nave seem to have been replaced by a four-centred one, corresponding in pitch with the relieving arch over the west windows, and the interval between was roofed in with stone to form

a bridge of communication from one side of the church to the other. The marks of both the earlier and later roofs may be seen against the tower, the south and east sides of which exhibit corresponding changes in the case of the transept and presbytery roofs.

The south aisle of the nave has in each bay except the third and eighth a plain round-headed window, and is covered by a stone vault with transverse and diagonal ribs springing on the wall side from groups of heavy triple corbels between the windows (see fig. 61). In the first bay is the cloister doorway, a wide round-headed opening with billeted rear-arch. The third bay has lost the original window, which has been replaced by a large four-light one of the fifteenth century.

The eighth bay has no window, but contains a wide doorway, with billeted rear-arch, which opened originally from the court west of the cloister. It was the entrance into the church for the lay-brothers, and must also have served for the passage of the Sunday procession after it had visited the cellarer's building.

The west wall of the aisle has a doorway into a corner turret leading to the roofs, and a window like those in the south wall.

The north aisle closely resembles the south, and has also an inserted window, originally of three lights, in the third bay. It has, too, an important doorway from without in the last bay, with a rear-arch wrought with continuous mouldings. There is no window over this doorway. The west wall contains an original window, like others in the aisle, but has no turret doorway.

So complete a sweep has been made of all the arrangements of the nave that they can only be recovered by careful note of the traces of them which are left on the pillars.

The first two bays contained the quire of the monks and novices. The eastern limit of their stalls is uncertain, and it is quite possible that at one time they extended some way into the crossing, stopping sufficiently short of the *gradus presbyterii* to allow of the openings from the transepts called the upper entrances (*superiores introitus*).¹ At the western end the stalls were returned against the solid stone screen called the *pulpitum*, which crossed the nave between the second pair of pillars, as may be seen by the cutting down of their bases on the nave side.² This screen was surmounted by a loft or gallery, whence its name, from which the epistle and gospel were sung on festivals, and had in the middle of its western side the quire door or lower entrance (*introitus inferior*). Whether, as was sometimes the case, the quire

1. The upper entrance from the south transept was that by which the monks and novices came into quire from the dorter and cloister.

2. There is a hole in the second pillar about 9½ feet up, facing south-east, and a hole in the opposite pillar about 5 feet up, facing north, which probably held irons for fixing the screen.

door had an altar on either side of it, is uncertain, owing to the total destruction of the screen against which they could have stood. But there was certainly an altar against the pillar to the north, where part of its step remains and a loose floor-drain. Immediately to the south of this altar, as the marks on the pillar show, stood a pedestal 4 feet high surmounted by an image. There are no signs of a corresponding altar on the south side.

About 12 feet west of the *pulpitum* was another but thinner screen, also crossing the nave from pillar to pillar. The bay thus enclosed by the two screens formed the retro-quire (*retrochorus*) for the infirm monks, and for those who had been blooded and were released temporarily from full attendance in quire.¹ Their place here is plainly indicated in the *Consuetudines*, which direct that when they are to go up to the presbytery step for holy water, "let those who may be outside the quire or in the retro-quire come through the upper entrance of the quire and return through the middle of the quire";² that is, they were to go round through the transept to the upper entrance, but return direct to the retro-quire through the lower entrance. There is nothing to show how the retro-quire was furnished, but it probably had benches for sitting on against the western screen. To give more light to the retro-quire the larger windows were inserted in later days in the third bay of the aisles.

The western screen was so placed that its east face was in line with the like face of the bases of the third pair of pillars, and there are plain marks on the pillars themselves of the iron fixings that held it in position. It probably carried a gallery, formed, in continuation of that surmounting the quire screen, by ceiling over the retro-quire. On the front of this gallery, towards the nave, was the usual place of the great Rood and its attendant images. In the middle of the screen was a doorway.

It is evident from the cuts in the bases that the arches of the bay west of the screen were closed by wooden screens, and there are still some remains of a stone step that crossed the nave between the fourth pair of pillars. Upon the platform thus formed were no doubt two large chapels enclosed by screenwork, each containing an altar set against the rood-screen. Between the chapels space was left for a passage to the rood-screen doorway.

The four remaining bays of the nave were originally shut off from

1. At Clairvaux, in 1517, it is recorded: "Au bout dudit chœur, pour tirer en la nef et chœur des convers, y a séparation entre iceux deux chœurs, en laquelle séparation y a trente-quatre chayes pour seoir à oyr le service les vielz et debiles religieux; au bout de laquelle séparation y a ung grant autel de la Trinité, dessus lequel est le crucifix de l'église." Didron, *Annales Archéologiques*, iii. 227.

2. "Qui vero extra chorum vel in retro chorum fuerint, tam monachi quam novitii veniant per superiorem introitum chori, et per medium chorum revertantur." *Consuetudines*, iv. *Nomasticon Cisterciense*, 133.

the aisles by solid stone walls, about 3 feet thick, but of uncertain height.¹ These were not bonded into the pillars, but so ran between and in front of them in line with their bases as to show a continuous face towards the nave. That these walls were provided for from the beginning is shown by the base-molds of the pillars being completed only on the aisle side, and left unwrought where they would be covered by the walls.²

These walls have been regarded as peculiar to the Cistercians, and so far as their presence down the nave is concerned this is the case, but it was a common practice to build such walls in quires to set the stalls against, as at Canterbury and elsewhere, and they evidently served the same purpose here for the stalls of the lay-brothers, whose quire was in the body of the church.³

At first these screen walls seem to have blocked the last five arches, a fact suggestive of there originally having been no second cross screen for the nave altars to stand against, and that their first situation, if they then existed at all, was against the *pulpitum*. In that case the stalls of the lay-brothers probably stood in front of the fourth, fifth, sixth, and seventh bays. After the setting up of the rood-screen and its altars the lay-brothers' stalls occupied three bays only, as is shown by the existing remains of the rough walls that they were set upon. The last bay was from the first crossed on each side by the screen wall, but this must have been pierced by doorways for the admission of the lay-brothers themselves into their quire.

At some unknown date, but probably not earlier than the latter half of the fourteenth century, the lay-brothers' quire was done away with, because the lay-brothers as such had ceased to form part of the convent,⁴ and their stalls and the walls they stood against were cleared away. As in the case of Fountains and Rievaulx, a series of chapels was next gradually introduced beneath the arcades and in the aisles, and other changes effected. One of the most noticeable of the latter is the working of the unwrought sections of the base-molds of the

1. At Tintern, where the church was rebuilt in the thirteenth century, these screen walls were 11 feet high.

2. The same peculiarity, and for the same reason, may be seen at Fountains, Buildwas, and Jervaulx.

3. For the difference between the *status* of a monk and that of a lay-brother, see *post*, under the description of the Cellarer's Building.

The fact that the nave of a Cistercian abbey formed the quire of the lay-brothers was first pointed out by the writer in a description of the Abbey of Fountains [*Yorkshire Archaeological Journal*, xv. 310]. The documentary proof of such use is slight but clear. At Meaux, a daughter house of Fountains, an inventory of 1396 includes among the *ornamenta ecclesiæ*, besides the monks' stalls in their own quire, *altis stallis superioribus ex utraque parte et bassioribus ex utraque parte conversorum in occidentali parte ecclesiæ* [Chronica de Melsa (Rolls Series 43), iii. lxxii.]. The numbers are not given, the blank spaces for them in the MS. not having been filled up. The monks' stalls were put in during the abbacy of Michael de Brun, 1235-49, and those of the lay-brothers in the time of abbot William of Driffield, 1249-69. Among the works done during the abbacy of abbot Hugh, 1339-49, was the setting up of a new Rood in choro conversorum, and on abbot Hugh's death he was buried in medio chori conversorum coram crucifixo quem fecit exaltari. [*Ibid.* iii. 37]. At Clairvaux, in 1517, below the altar of the Holy Trinity which was in the nave beneath the Rood, it is recorded that "à la descente dudit autel est le chœur et siège des convers, et sont lesdicts sièges en nombre de trois cens xxviii, que sont à trois rangées, assavoir: les hauts, les moyens et les bas. Lesquels sièges occupent tout la nef de ladicte église, jusques au bout d'icelle église, ou est la grand porte." [Didron, *Annales Archéologiques*, iii. 227].

4. See *post*.



Photographed by J. Gascongne

Fig. 14. North-west corner of the nave.

pillars then laid bare with clumsy imitations of the moulded sections. Another alteration was the chamfering off on the aisle side of the corners of the massive bases of the fourth, fifth, and sixth pillars. The angles of the bases of the seventh pair of pillars which face the adjacent doorways have been similarly treated, apparently to enable the holy water stocks to have been there placed with as little prominence as possible.

The traces of the chapels are slight but clear. On the south side there was evidently a chapel under the fifth arch, and from 4 feet up the pillar is cut away to allow of the insertion and fixing of a reredos about $5\frac{1}{2}$ feet high against it (see fig. 66.) There are some slight traces suggestive of the existence of another chapel in the aisle behind. Another chapel certainly stood under the sixth arch, as may be seen by the pin holes for the fixing of the reredos of its altar against the fifth pillar and by other holes higher up in both the fifth and sixth pillars for the enclosing screen on the aisle side.

On the north side the traces of a corresponding series of chapels are equally prominent. Under the fifth arch was an altar closed by wooden screens north and south, the notches for which may be seen in the pillar bases, and the western face of the base of the fourth pillar has been cut down to allow of the altar being built against it. In the aisle behind was also a chapel. Its east end was closed by a screen about $7\frac{1}{2}$ feet high across the aisle from the north-east corner of the fourth pillar, and its west end by a like screen from the south-west corner of the fifth pillar. Another chapel stood beneath the sixth arch, enclosed by wooden screens north and south, and in the fifth pillar, about $4\frac{1}{2}$ feet up, is a pin-hole for the fixing of the table or reredos over the altar.

These later arrangements of the nave, which probably existed down to the Suppression, are indicated on the plan.

In passing from the internal to the external features of the church, it will be convenient to begin with the west front.

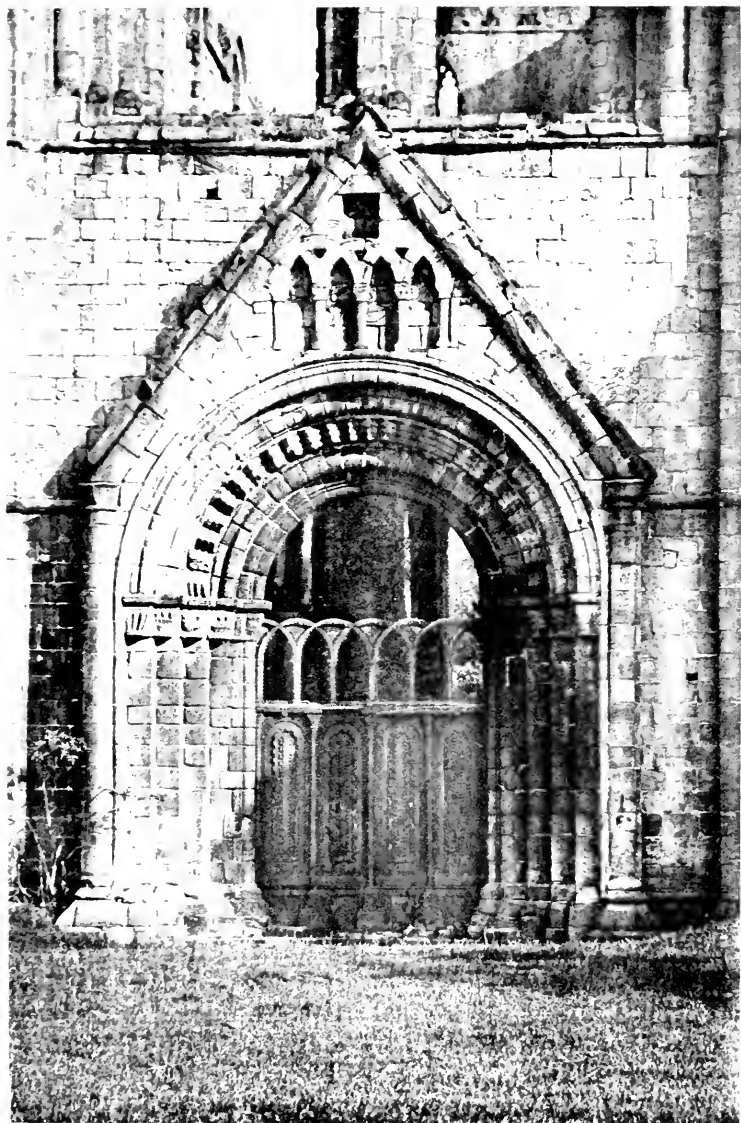
The west front is divided practically into three stages, flanked by broad pilaster buttresses with re-entering angles (see fig. 1). The lowest stage contains, within a porch of slight projection, a round-headed doorway of five orders, of which all save the innermost were once carried by detached jamb shafts, with scalloped capitals of various patterns. The orders themselves are plainly moulded, except the third, which is worked into bold zigzags. The doorway is flanked by two half-round shafts which carry the straight-sided pediment of the porch. This has an outer member set with billets and was perhaps surmounted by a cross, but the gable stone has

disappeared. Within the pediment and immediately over the doorway is an interlacing wall arcade of four arches, above which is a square hole of uncertain use (fig. 15). The second stage of the front contains two large round-headed windows, side by side, with moulded arches of two orders carried originally by detached shafts, and surmounted by labels ornamented with bosses and ending in heads of muzzled bears. The windows are flanked by two bold engaged shafts with scalloped capitals that probably once carried an enclosing arch containing a large circular window, but all traces of this were destroyed in the fifteenth century. The upper stage of the front was then rebuilt and the two large windows filled with tracery, of three cinquefoiled lights with embattled transoms, and smaller lights in the heads (see fig. 1). The original flanking shafts now carry nothing, but over the windows is a plain belt of ashlar with a four centred relieving arch carried from side to side. Above this in the lowered gable is a pointed window of two lights, still retaining its tracery. The gable, which has a raking, embattled parapet, is surmounted by a tall square pinnacle with panelled sides. The buttresses flanking the front are divided by string-courses into four stages, and are quite plain. In the south buttress the two top stages are pierced by small and narrow loops to light a vice within which afforded access to the nave roof. The original terminations of the buttresses disappeared at the time of the later changes above described and were replaced by square hollow turrets of curious design. These are two stories high, the lower being pierced with a double series of pairs of narrow pointed loops on each of the outer faces, and the upper story by a third series of like loops surmounted on each side by a straight sided gable, traceried and crocketed. The inner faces of the lower stories have doorways into them from the nave parapets and on to the western gable.

The ends of the nave aisles each contain a plain round-headed window, and the corners are clasped by pilaster buttresses. Attached to the south-west corner of the south aisle is a square turret containing the staircase or vice up to the roofs.

There are no signs of any porch having covered the lower part of the front, as at Fountains and Byland.

The north side of the church shows (1) the simply moulded plinth which runs all round the building, and (2) a plain band of wall broken by the pilaster buttresses that mark the bays; over this is (3) the window stage. The windows, with the exception of that in the third bay, a fifteenth century insertion, are plain and round-headed, with a connecting string-course running between and round them for a



Photographed by C. H. Bothamley.

Fig. 15. West doorway of the nave (before the late repairs).





Photographed by Gordon Brown.

Fig. 16. North doorway of the nave (before the late repairs).

hood-mold. Over the windows was a corbel table to carry the parapet.¹ The last bay has no window, but contains a large and handsome round-headed doorway of unusual design (fig. 16). It is of three orders, of which the innermost and outermost are plainly moulded, and the middlemost worked into zigzags; the two outer orders were carried by detached jamb shafts with scalloped capitals. Enclosing the whole doorway is a remarkable return of the uppermost member of the base-mold, carried all round it embattled-wise in fashion of a frame. Over this was a straight-sided pediment with a recess in the gable for some lost sculpture or other ornamental feature.

This doorway, like that which opens into the north transept at Furness, was evidently regarded as one of the principal entrances to the church. From it there extended northwards for about 50 feet a broad porch or Galilee which, as its junction with the aisle shows, was a contemporary work. It was 16 feet wide, with walls 28 inches thick and about 12 feet high, with chamfered plinths in continuation of that extending round the church. In the absence of any porch across the west front this north porch evidently served the same purpose as the Galilee porches at Fountains, Byland, and Rievaulx.²

To the east of the porch are the remains of an adjoining chamber or chambers, one of which shows the hearth of a large fireplace with a stone-flagged floor in front. There are traces of two other fireplaces further north, one of which belongs to a building that may have extended eastwards (see large plan).

All these buildings not improbably were connected by a wooden pentise with a guest-house or other structure to the north.

The nave clerestory windows rise from a string course, and are plain round-headed lights with jamb shafts carrying a single order. The abacus of the shafts is a continuation of a string-course which runs round the intervening pilaster strips that mark the bays and connects the windows. Above the windows was a corbel table carrying the parapet, which was, at any rate in later times, of the usual embattled type.

The west side of the north transept shows two ranges of windows divided by pilaster buttresses running up from the ground to the cornice. Of these ranges the lower is on the same level as the aisle windows, but its windows are somewhat taller, and have over them

1. The openings in the parapets of both aisles are apparently the remains of windows that lighted long chambers constructed in later days for some unknown purpose above the vault of each aisle. On the south side the line of the chamber roof may be seen upon the transept wall.

2. I am indebted for this probable suggestion to Mr. Harold Brakspear, F.S.A.

The western porch existed at Clairvaux, Pontigny, and other abbeys abroad. At Rievaulx it is described in the Suppression Survey as "the house or portico at the west end of the Church," and had a leaded roof. [*Chartulary of Rievaulx* (Surtees Soc. 83), 340]. At Byland it was called the Galilee, and Mr. Walbran quotes [*Memorials of Fountains* (Surtees Soc. 67, ii. pt. i. 201)] the will of one William Tiplady, 1426, who desires to be buried in the Galilee of St. Mary of Byland. It was also a favourite burial place at Fountains, as may be seen by the slabs still covering the stone coffins remaining at either end.

a broad band of ashlar extending to the range above. This upper range is simply a continuation of the nave clerestory (fig. 17).

The gable or north end of the transept is flanked by the broad pilaster buttresses with re-entering angles which clasp the corners, and is also divided vertically into three panels by lofty pilasters rising from the ground and dying into the wall above the upper row of windows. It is also divided horizontally into three stages by string-courses carried round all the buttresses and pilasters (fig. 17).

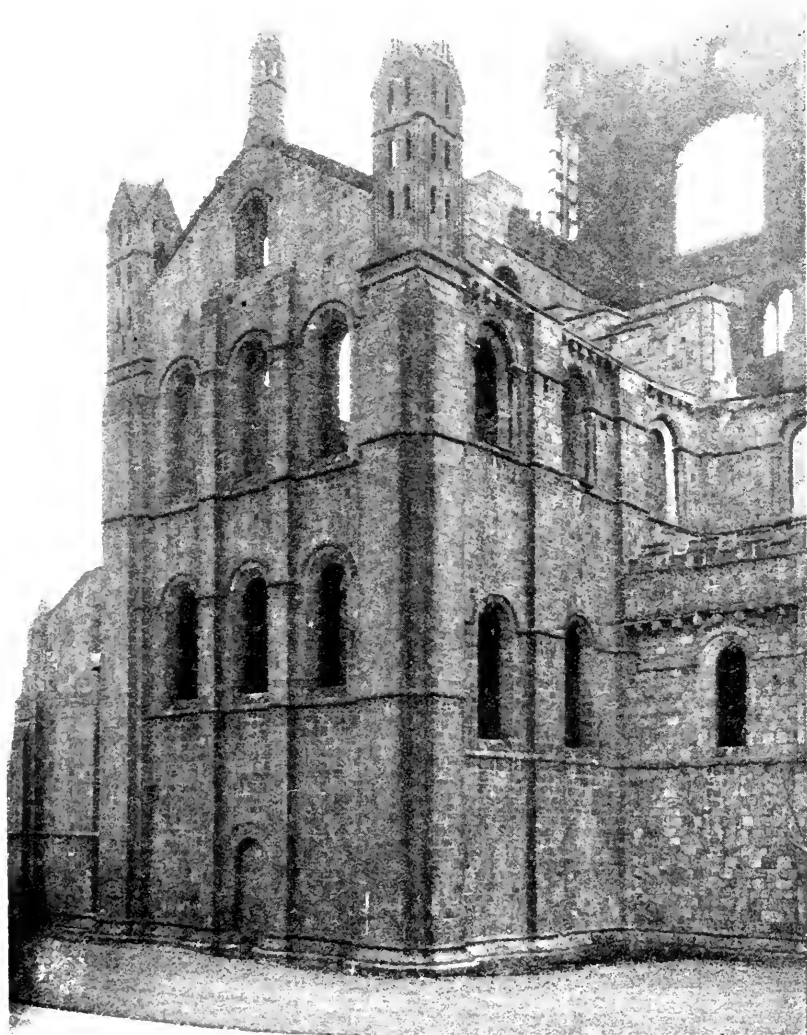
The lowest stage is quite plain, but has in the middle a doorway from without of simple character. ¹

The second stage contains three windows, one in each compartment, rising from the dividing string-course. The hood-molds of these are formed by a string-course which starts from one angle buttress and ends against the other, after passing over each window and across the intervening pilasters. Above the windows is a narrow belt of ashlar.

The upper stage contains a similar row of windows, rising also from the main string-course, and having another string-course carried over them as a hood-mold. The gable was originally higher than now, and pierced by a large pointed-oval window. But in the general alterations of the fifteenth century, when all the gables were lowered, a new window of two lights and traceried head was inserted, and the stones of the old pointed-oval window used to form its jambs. The gable itself retains the stumps of an embattled parapet, and is surmounted by a square pinnacle, the upper part of which is pierced like a bell box, with a pointed opening in each face. The angle buttresses are surmounted by similar turrets to those at the west end of the nave. Each of them has a square-headed doorway in the south face, at the parapet level, communicating with a wall passage through the gable, and also a pointed doorway on to the parapet of the gable itself.

The eastern side of the north transept is covered, as to its lower half, by the three projecting chapels, the divisions of which are marked by pilaster buttresses. The original chapel windows have in each case been replaced by larger and later, as noted above (fig. 19). Over the middle window is part of the original corbel table, formed of small semi-circular arches springing from corbel to corbel. On this in later days stood an embattled parapet, but the original arrangement was an eaves roof, as may be seen by its line on the presbytery wall. The clerestory windows above are arranged as on the west side, but are probably somewhat earlier in date; they are plain, like the aisle windows, and have no jamb shafts.

1. A doorway in this position is an invariable feature of every Cistercian church, and was probably the way by which the dead were carried out for burial to the cemetery, which lay round the east end of the church. In later churches, as at Furness, Byland, Jervaulx, Waverley, etc. it is usually of more architectural importance than the plain and narrow doorways at Kirkstall and Rievaulx.



Photographed by Godfrey Bingley.

Fig. 17. The north transept, from the north-west.



The side walls of the presbytery are divided into bays by broad pilaster buttresses, and by string-courses into four stages. The whole is of plain ashlar, unpierced by windows, except in the third stage of the easternmost bay. Here there is on each side a sunk round-headed panel, within which is a window. As the head of the panel rises into the fourth stage, the dividing string-course is carried into the panel and over the window as a hood-mold (fig. 20).

The angles of the presbytery, like the other gable ends, are clasped by broad pilaster buttresses, with re-entering angles, round which the string-courses are carried. The east end, as the plinths and bases show, was originally divided, like the north transept gable, into three vertical strips by pilaster buttresses, and pierced by three windows in the second stage, with a large round window, between four sunk circular panels, in the stage above (fig. 18). These were eventually replaced by a great fifteenth century window of nine lights with transoms, and lesser lights in the head (fig. 19). All the tracery has, however, long fallen out, but the design can easily be recovered from the remaining attachments. The present sill is quite modern.¹ Over the point of the window is part of an attached half-round pilaster, of the first work, and above it, in the re-constructed gable,² a two-light traceried window. The gable is surmounted by a square pinnacle and flanked by hollow turrets like those on the nave and transept gables. The pinnacle has sunk trefoiled panels in both stages, the uppermost of which are pierced, and over these is an embattled parapet from which rises the crocketed spirelet. The flanking turrets, as elsewhere, have lost the little spires that originally rose from the intersection of their gables.

The east side of the south transept is arranged almost exactly like that of its fellow, especially as regards the clerestory, but has no string-course below the chapel windows (fig. 19). The latter have also lost their sills and tracery. The south gable is arranged in a way peculiar to itself (fig. 20). Up to the clerestory string it was covered by the eastern range of the claustral buildings which abutted against it. The south-east angle is clasped by two pilaster buttresses, with a re-entering angle at their junction. This is not, however, carried up to the top, but stops on the line of the adjacent window heads at a reeded and banded corbel, which supports the rest of the angle above.

The western angle is covered by a square and massive stair-turret, pierced on its west side with four narrow loops to light the vice within.

1. The old sill was long ago torn out and a roadway made right through the length of this church. This was not done away with until the making of the present road past the Abbey in modern times.

2. The older and loftier gable probably contained a round or pointed-oval window lighting the space above the presbytery vault.

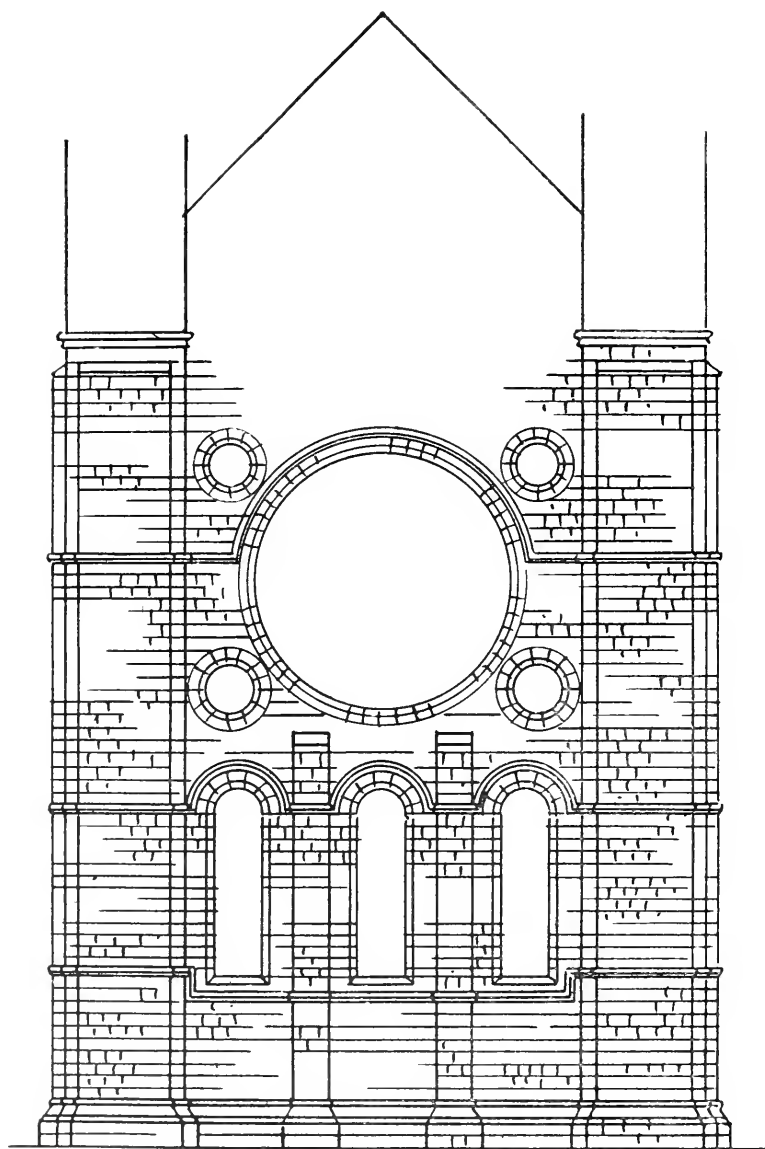


Fig. 18 Original arrangement of the east front of the presbytery.

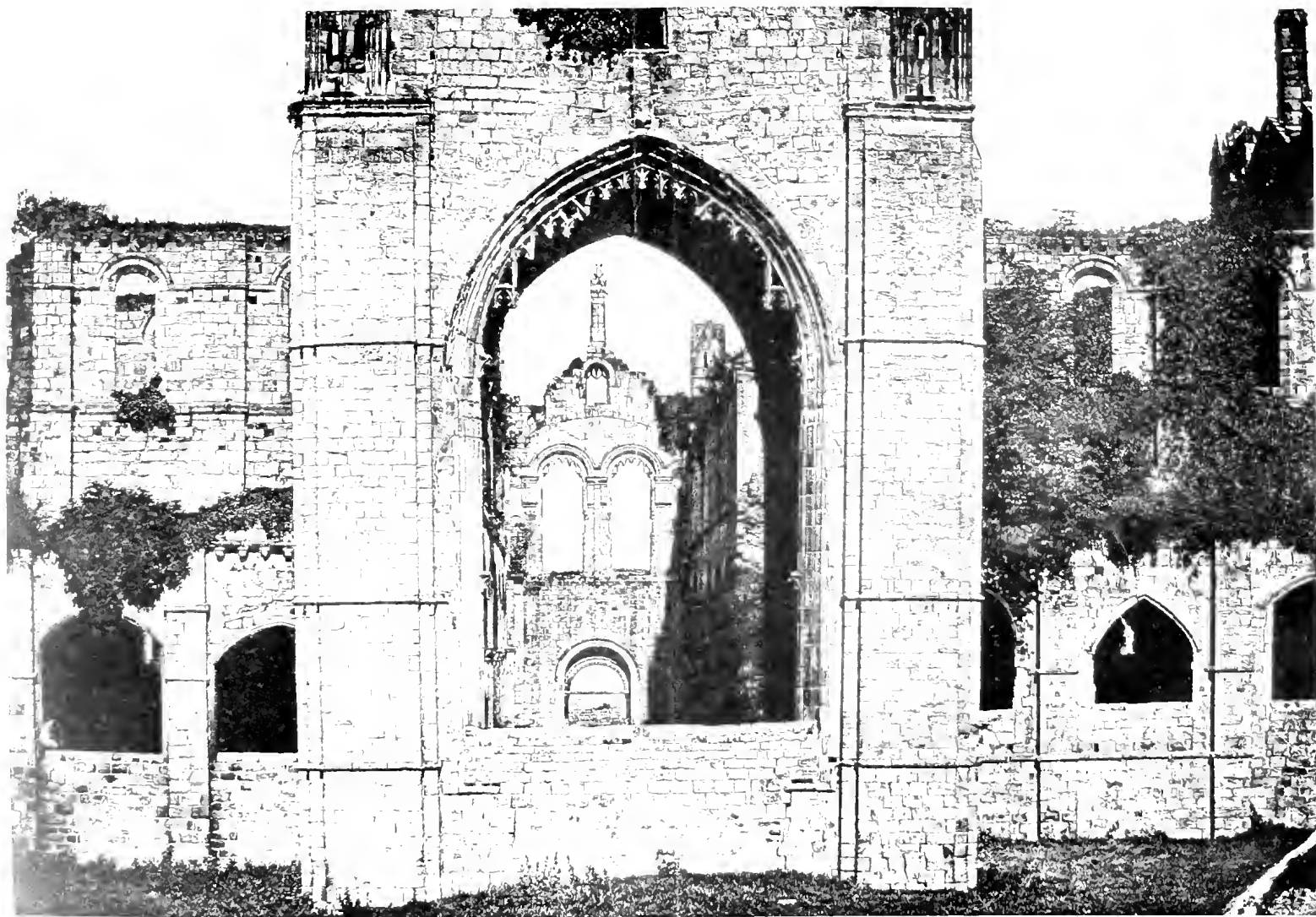


Fig. 19. East front of the presbytery.

Fig. 19. East front of the presbytery, showing traces of original windows (before the late repairs).

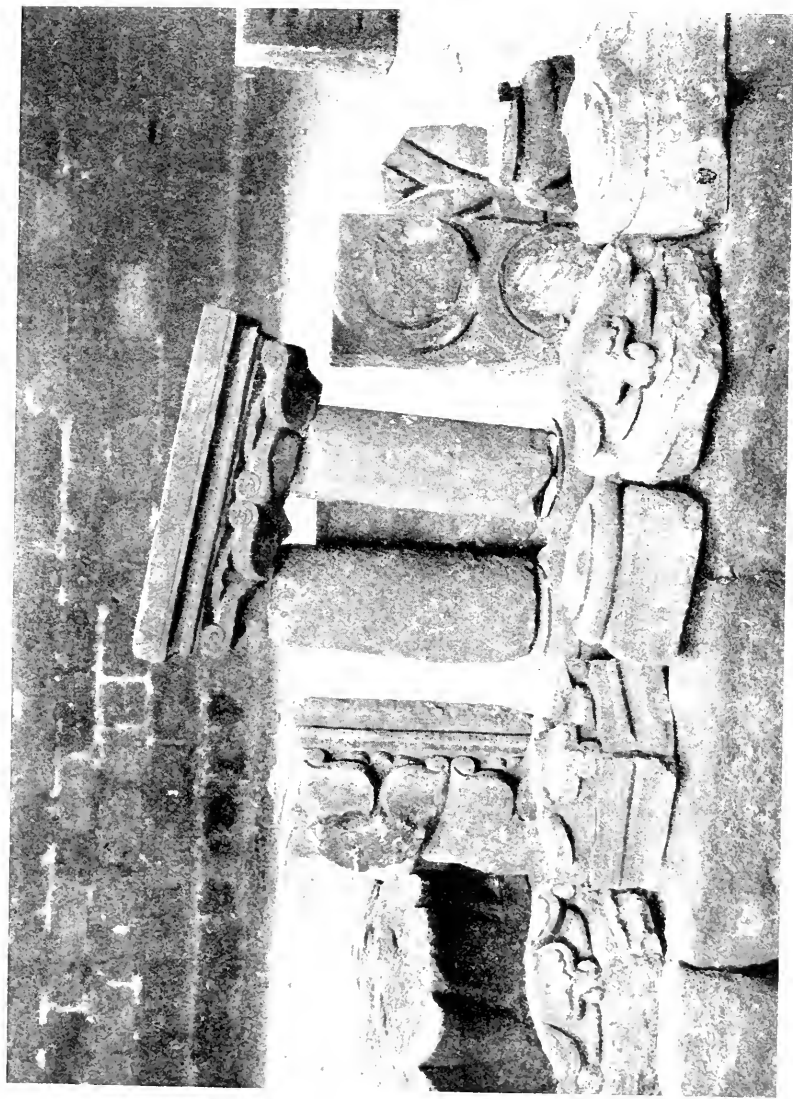




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Fig. 20. The church from the south-east (before the late repairs)





Photographed by Godfrey Bingley.

Fig. 21. Fragments of the arcades of the twelfth century cloister.



The clerestory windows, as usual, are three in number, but the dividing pilasters are continued upwards to some height and then turned over to form tall round-headed panels enclosing the side windows, and a taller pointed panel over the middle window. This middle panel is carried up sufficiently high to enclose also a pointed-oval opening in the gable. Within this opening has been inserted a two-light traceried window. The lowered gable retains the stumps of its embattled parapet and is surmounted by a plain square pinnacle pierced on all four sides by trefoiled openings as if for a bell box. The spirelet on top was a tall and simple pyramid. The gable is flanked, like the others, by hollow square and gabled turrets, originally carrying little spires.

Architecturally, the western side of the south transept is of the same pattern as that of its fellow, but it contains an additional feature in the ground story, to be noticed presently, and acquires a greater dignity from the increased height of its plinth, owing to differences of level.

As regards their windows and divisions, the south aisle and south clerestory are arranged as on the north side, but there are two doorways into the aisle, as well as other features in connexion with the cloister.

THE CLOISTER.

The cloister formed, as it were, the heart of a monastery, and inasmuch as the monks lived in it, all the buildings connected with their daily life were placed round it, and were accessible from it.

The cloister at Kirkstall has the church on its north side and as at first planned was 114 feet square, with covered alleys, about 12 feet wide, along all four sides. The cloister proper (*claustrum*) was actually the garth or open area in the middle, which was simply a grass plat. It was never used for burials. Of the wall that surrounded and enclosed the garth there are no remains above ground. A number of fragments (fig. 21) that have come to light during recent operations show that it was of the usual character, pierced by a series of round-headed arches carried by twin shafts.

The east, south, and west alleys of the cloister were chiefly passages, with doorways opening out of them into the various offices. The north alley was practically the living room of the monks, and against its north wall, which is the south wall of the church, were benches for them to sit on and read when not engaged in the church or elsewhere. These benches were usually of stone, but there are no remains or traces of them left. In the first bay is a large doorway which was the regular entrance from the cloister to the church (fig. 22). It is round-headed and of three orders, all plainly moulded, and carried, as regards the two outermost, by detached shafts, now lost, with scalloped

capitals. The upper member of the plinth along the wall, where it meets the doorway, is returned upwards and carried round the arch as a hood-mold. Owing to differences of level, there was an ascent of several steps within the doorway from the cloister to the church. For reasons to be stated below, there was no second doorway into the church from the cloister as first planned and built.



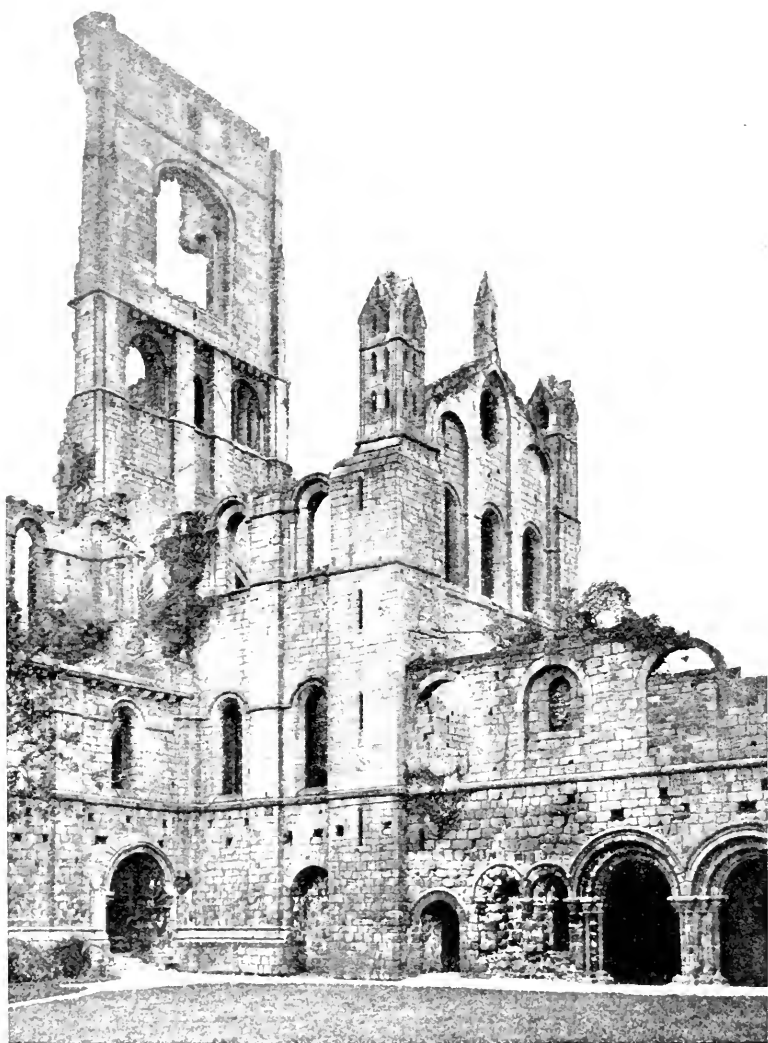
Photographed by C. H. Bothamley.

Fig. 22. Eastern doorway from the cloister into the church.

The buildings that opened out of the cloister of a Cistercian abbey are enumerated in proper order in the direction in the *Consuetudines* for the Sunday procession,¹ as follows : *capitulum* or chapter-house, *auditorium* or parlour, *dormitorium* or dorter and *dormitorii necessaria* or rere-dorter, *calefactorium* or warming-house, *refectorium* or frater, *coquina* or kitchen, *cellarium* or cellarer's building. These will be considered in their turns.

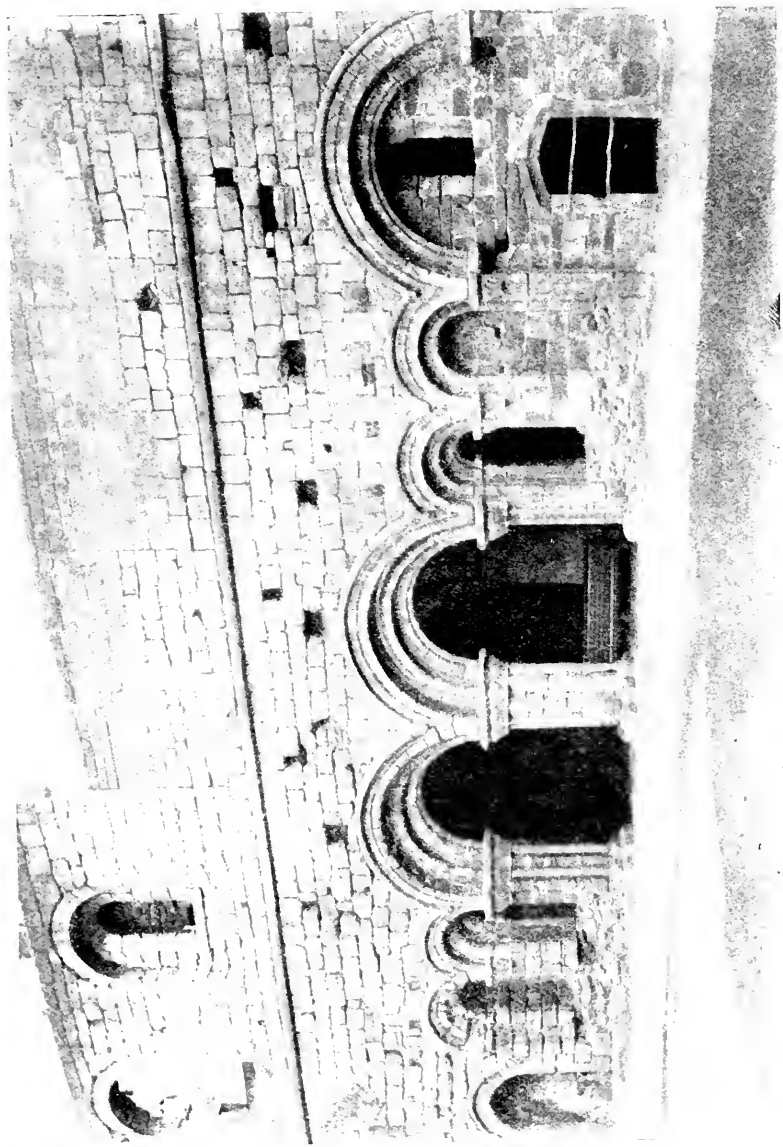
1. *Ecclesiastica Officia*, lv. *Nomasticon Cisterciense*, 133.

The Sunday procession was a weekly ceremony that has had far greater influence over the planning of buildings and the placing of screens and doorways than has hitherto been noticed. It took place before high mass, after the *benedictio aquæ*, and consisted in visiting and sprinkling with holy water all the altars in the church and the various buildings round the cloister, concluding with a "station" before the great Rood in the nave. During the procession, in which the whole convent took part, an anthem was sung, and at the station before the Rood the bidding prayer was said, followed by the Lord's Prayer, etc. and prayers for the dead. The procession then passed on to the quire, singing a respond the while, and the ceremony concluded with a collect said in quire. It was probably not thought necessary for the whole of those forming the procession to enter the different buildings mentioned, and the monks no doubt remained without while the priest and ministers went in with the holy water. In the same way the priest could visit any altars that were in the nave during the station, while the convent continued singing the anthem.



Photographed by F. Frith & Co., Ltd.

Fig. 23. South transept and north-east corner of the cloister
(before the late repairs).



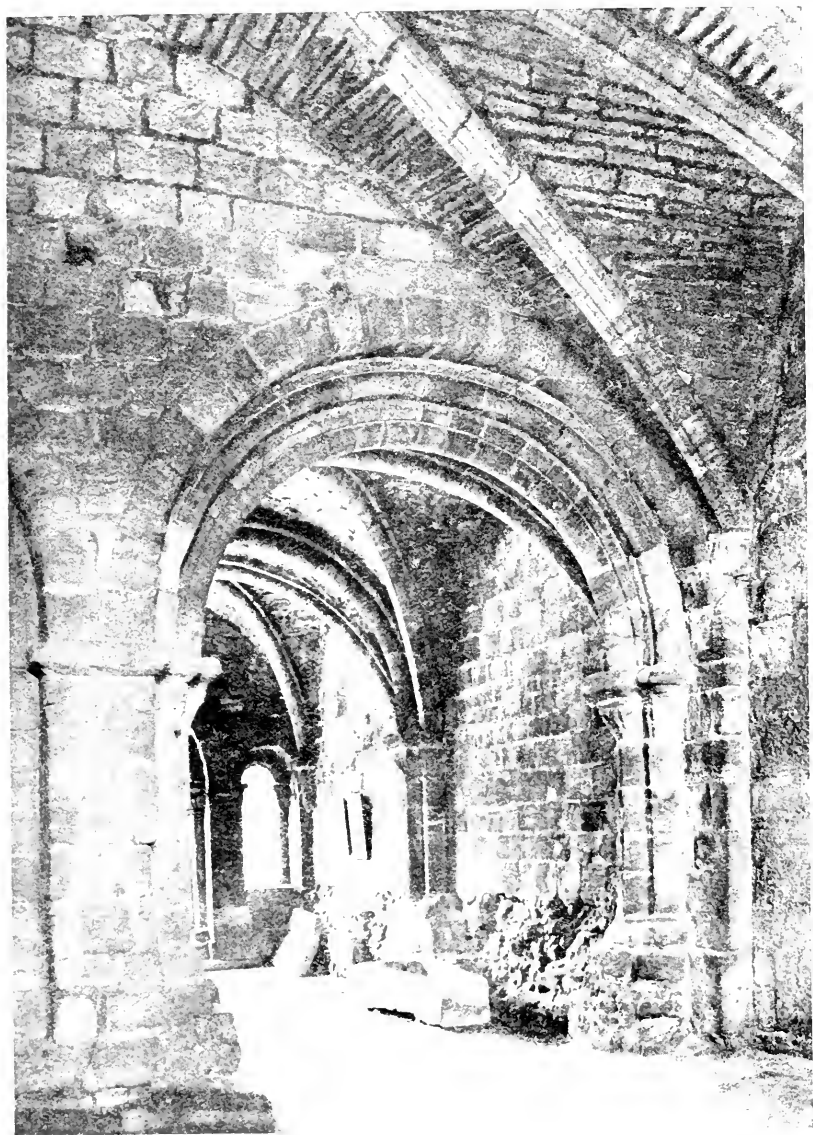
Photographed by Godfrey Bingley.

Fig. 24. East side of cloister, showing chapter-house entrances, etc. (before the late repairs).



Photographed by Godfrey Lingley.

Fig. 25. Interior of the chapter-house, looking west.



Photographed by Godfrey Bingley.

Fig. 26. Interior of the chapter-house, showing arrangement of the two vaults.

The north part of the east alley, for a distance of 29 feet, is overlapped by the south transept (fig. 23). The bay of this next the church is blank, but the second bay contains a large round-headed recess,¹ 3 feet deep, 6½ feet wide, and about 11 feet high. Although this now shews no signs of fittings, it no doubt contained a wooden cupboard, which formed the *armarium commune* or common book-case, wherein were kept such books as might be wanted for use in the cloister.

Beyond the turret at the corner of the transept is a low round-headed doorway into a small square chamber or closet covered with a barrel vault.² Its only feature now is a blocked modern fireplace in the east wall. This closet in early times contained the monastic library, and of that at Meaux there is record not only of what books it contained, but how they were arranged.³ Similar chambers exist or have existed in the same place at Fountains, Jervaulx, Roche, Beaulieu, Netley, and elsewhere.

THE CHAPTER-HOUSE.

Next to the library comes the *capitulum* or chapter-house, so called because a portion or chapter of the rule of St. Benedict was read in it daily after terce to the assembled convent. It was also the place where faults were confessed and corrected, discipline administered, and where the monks discussed their common affairs.

The usual arrangement of the west end of a rectangular chapter-house shows a wide doorway flanked on each side by a small window-opening. Sometimes, as at Fountains, the side openings are unusually large, but the general design is as described. At Kirkstall the chapter-house is distinguished by having two doorways side by side, each of three orders carried by detached jamb shafts, and round-headed (fig. 24). The doorways are flanked by the usual window openings, here deep set in the wall and with shafts to carry the innermost order. Beyond each window-opening is a deep niche of the same width and height. Doorways, windows, and niches all form one architectural composition, which also includes the parlour doorway beyond.

The western half of the chapter-house is about 28 feet square, and had originally a deep chamfered plinth, now partly destroyed, along each side (figs. 25 and 26). It is still covered by its ribbed vault,⁴ of four quadripartite compartments springing from a clustered

1. Similar recesses remain at Fountains and Waverley, and also at Rievaulx, but there the back has been knocked out, and the opening so formed is often mistaken for a doorway.

2. This forms the western part of the original passage, of which the eastern part forms the vestry.

3. There were four psalters in *communi almario claustrī*, in *suprema theca supra ostium*; nearly forty volumes stood in *suprema theca apposta*; and about 280 other volumes in *eodem armariolo in aliis thecis distinctis per alphabetum*. See the list in *Chronica de Melsa* (Rolls Series 43), iii. pp. lxxxv.—c.

4. The transverse ribs have a large keeled roll flanked by a smaller quirked roll on each side. The diagonal ribs have also a large keeled member, somewhat narrower than the rib itself, which is square edged. The transverse ribs and wall-cells are semicircular.

column (originally of eight shafts) in the middle, from vaulting shafts at the sides, and from corbels in the angles. There are no wall ribs. This western half formed a vestibule to the part beyond, which was entered from it by two boldly moulded semicircular arches with equally bold side shafts. The soffit order is moulded like those of the arches to the transept chapels.

The original eastern half, if it were vaulted, which it no doubt was, must have been much loftier than the western, as is evident from the ashlar walling above the eastern side of the dividing arches. The eastern part was, however, for some unknown reason, entirely rebuilt late in the thirteenth century. The newer part is also 28 feet square and covered by a ribbed vault of three bays in one span (figs. 25 and 26). In the east wall are two deep and lofty recesses, which originally had at the back triplets of pointed lancet windows, now destroyed. Adjoining these on each side is a like but narrower recess containing a double lancet window (fig. 27). There are no remains or traces along the walls of the usual stone benches. The walls themselves of the thirteenth century work are faced internally in large part with stone coffins, with their lids on, arranged in tiers (see fig. 25). These coffins were no doubt disturbed during the rebuilding of the chapter-house, and then put to this unusual use instead of being moved elsewhere. Others may be seen in the outer walls and in the buttresses.

THE PARLOUR.

Next to the chapter-house southward is the *auditorium juxta capitulum*, or parlour. Here such talking as was necessary might be carried on instead of in the cloister, where silence was strictly enjoined.

The parlour is 12 feet wide and 29 feet long and covered by its ribbed vault of two bays, which springs from corbels in the side walls. The entrance was at first by a wide archway like those of the chapter-house, but late in the fifteenth century, when the original use of the parlour had passed away, the arch was filled up behind by a wall pierced by a low four-centred doorway with a window over (fig. 24). The east end of the parlour has an original plain square-edged doorway, but this was walled up at the same time as was the entrance. It is evident therefore that at one time the parlour also served as a passage, probably to the cemetery round the east end of the church.

THE DORTER.

Just beyond the parlour is a plain round-headed doorway of two orders opening into an entry or passage about $7\frac{1}{2}$ feet wide. Its western end is covered by one bay of a ribbed vault. The rest was



Photographed by Godfrey Bingley.

Fig. 27. Window of the chapter-house (exterior).



originally open and from the entry there ascended through it a flight of stone steps. These led up to the monks' *dormitorium* or dorter.¹

The dorter occupied almost all of the upper story of the eastern range of buildings, and extended from the transept southwards as far as the rere-dorter, a distance of nearly 170 feet. Besides the stair from the cloister, which the monks used by day, there was another at the north end, communicating directly with the church, by which the monks went to say their night offices.² The upper part of this night stair was in the dorter, and had halfway up, on the right, a doorway into a small vaulted cell or treasury over the book-closet below.

The dorter was lighted on each side by a range of round-headed windows set, like those on the sides of the presbytery, within square-edged recesses, also round-headed. The second window from the transept on the west still remains in its original condition (figs. 23 and 24). The rest are modern "restorations," or have been altered in the fifteenth century, like the two southernmost of those overlooking the cloister.³ On the west side, beginning from the church, were seven windows, next comes a narrow door into a room formerly over the warming-house vault, beyond which the wall is now modern, but within the writer's memory it had a breach for a later entrance into the dorter, and south of it a window. The rest of the west wall is ruined, but probably contained two more windows. On the east side there was a window next the transept, but the place of the next three was taken by a wall across the chapter-house. This contained a doorway from the dorter that opened into a room on a higher level over the chapter-house itself, which formed part of the dorter, but the outer walls of this have been destroyed. Beyond this point there are three more windows, mostly "restored," and there were five others to the south, but the wall that contained them has fallen down.

The dorter was originally covered by a wooden roof of such lofty pitch that, as its lead line against the transept shows, it crossed the two outer windows of the transept gable and completely masked the middle one; it must, in fact, have been the same pitch as the first roof of the transept itself (see fig. 20). In later days the old high roof was taken down, and replaced by one of so low a pitch, that its ridge did not come up even to the string-course under the transept windows (figs. 20 and 23). As the dorter never had any parapets both the earlier and the later roofs were carried out to the edge of the corbel table over the windows.

1. The Old English word "dorter," meaning a dormitory or sleeping-place, occurs in the form of "dortore" before the end of the thirteenth century. It is derived directly from the Old French *dortour* or *dortoir*, which in turn comes from the Latin *dormitorium*. See *A New English Dictionary*, iii. 607, s.v. *Dortour*, Dorter.

2. See *ante*.

3. Only one of them retains the inserted work, which is of two cinquefoiled lights within a square head; the mullion is modern.

THE RERE-DORTER.

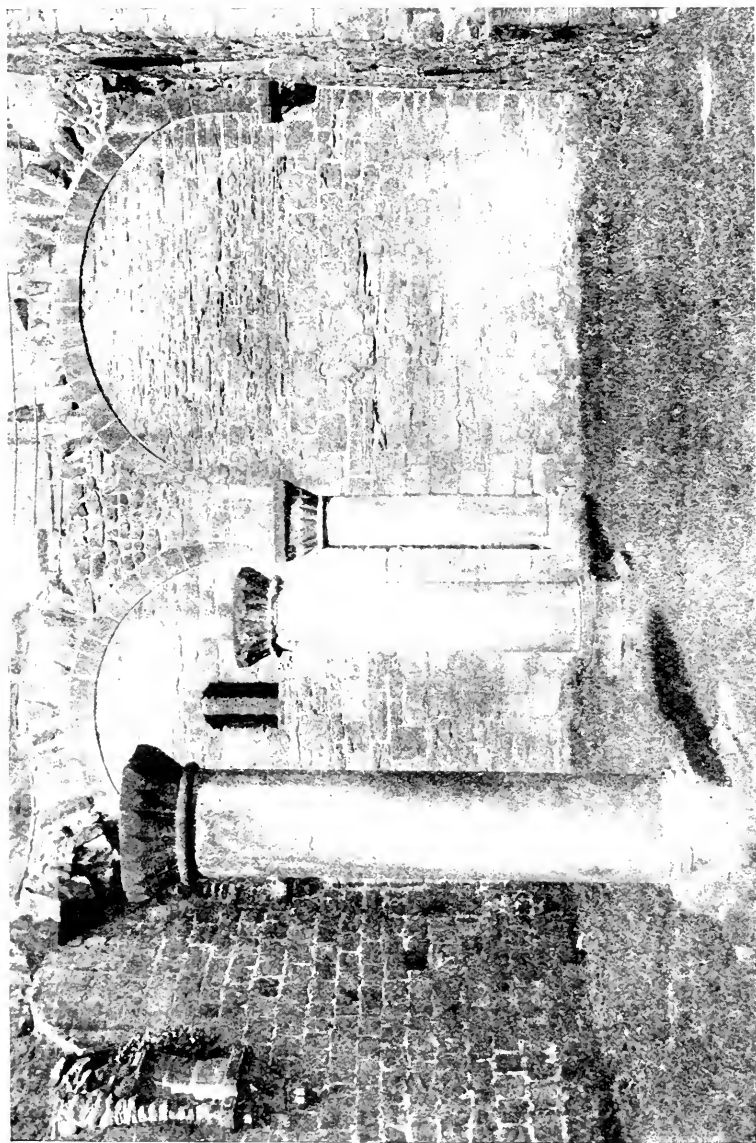
At the south end of the dorter a portion of wall is standing with a doorway in the middle, which led into the *dormitorii necessaria* or rere-dorter. Unlike other Cistercian examples, this is not a separate structure extending outwards from the dorter, but a continuation of the eastern range. It is also much smaller than usual. The building itself has been so ruined that nothing of its side and end walls remain, but its extent and arrangement can be recovered from the chambers beneath it, which are fortunately perfect, as is also the drain that ran through and flushed it. These show that the rere-dorter was a lofty chamber 29 feet wide and 37 feet long, traversed from east to west by a double row of seats set back to back down the middle over the drain below. Access from one side of the chamber to the other was by a passage at one or both ends of the rows of seats. The roof was probably of the same height as and a continuation of that over the dorter.

The stair by which at first the dorter and rere-dorter were reached from the cloister was superseded in the thirteenth century by another elsewhere. The lower steps were then removed, the opening into the dorter vaulted over, and the entry put to some other use. The large doorway was also built up and a much smaller one made in the blocking.

THE DORTER SUB-VAULT.

At the south end of the eastern alley of the cloister and next to the old dorter stairs is a low and plain round-headed doorway of two square-edged orders which opens into a narrow slype or passage through the range. This has a similar doorway to that at the entrance at the opposite end and is covered by a plain pointed barrel vault. In the middle of its north side is a blocked doorway that originally led into a small chamber under the dorter stairs, lighted by a window on the east, and with a recess in its south wall. In the south side of the passage is another doorway (which for some reason has been increased in width on the west), that led into the dorter sub-vault. This is five bays long and was vaulted throughout with unribbed vaulting carried by transverse square-edged semicircular arches resting on scalloped corbels against the walls, and down the middle of the room on a row of tall and cylindrical monolith pillars with moulded bases on square plinths and scalloped octagonal capitals. The vault, which is of later date than the walls, was practically intact until 1825, when almost the whole fell in.¹ Only the transverse arches of the northernmost bay are now standing. Such of the pillars as fell with the vault have lately been set up again (see fig. 28).

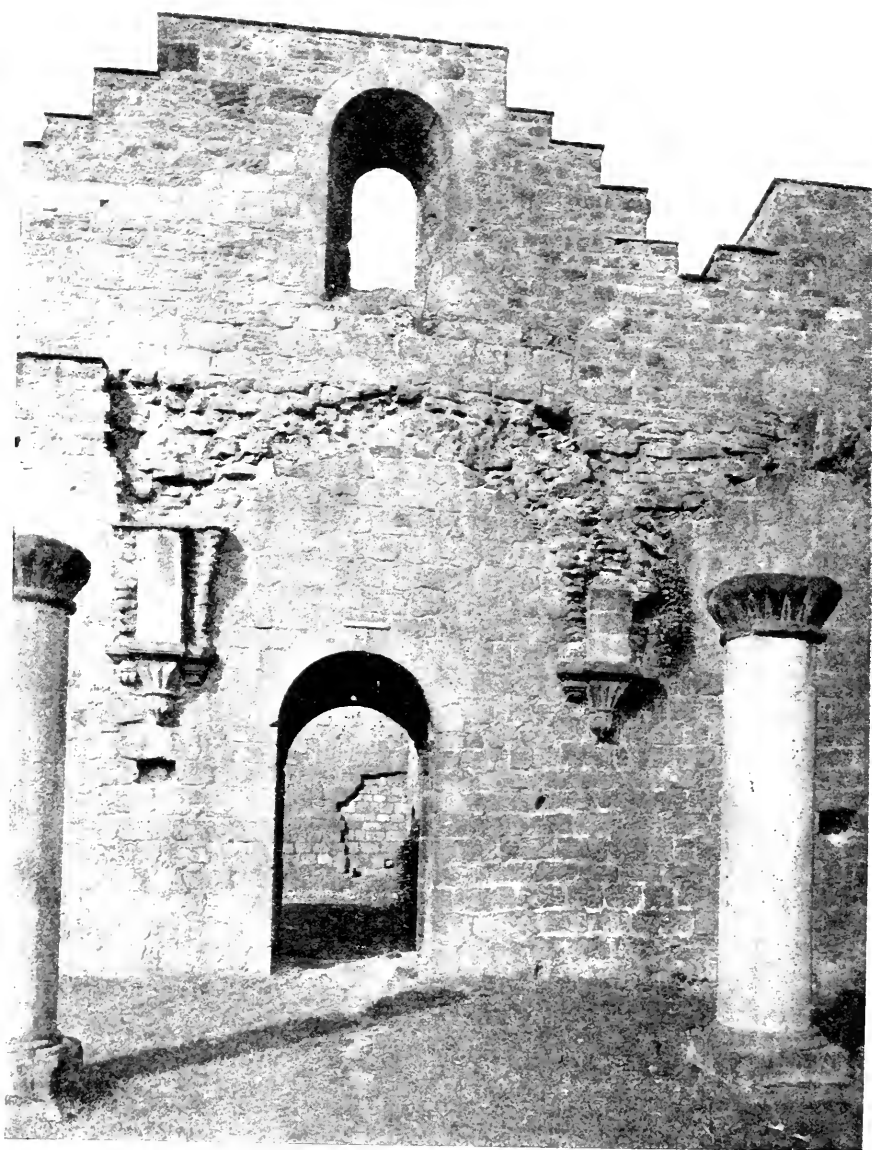
1. The three southern bays are shewn with the vault standing, but in a ruinous condition, in John Coney's drawing, engraved in 1817, in the large edition of Dugdale's *Monasticon Anglicanum* (ed. Caley, Ellis, and Bandinel), v. 526.



Photographed by Godfrey Bugler.

Fig. 28. Remains of pillars and vaulting of the choir sub-vault.





Photographed by Godfrey Ince

Fig. 29. Remains of vaulting of dormer sub-vault.

The first bay of the dorter sub-vault has the doorway from the slype on the north and a window on the east. It is cut off from the rest by a wall, which in part may be ancient. The second bay has also an east window, within the upper part of which has been inserted a later pointed light. The lower part of this has been partly built up and a square opening made in it right through the wall. Neither the first nor the second bay had any west window owing to the warming-house being on that side. The third bay served as a passage through the range, and has at each end a plain square-edged doorway (fig. 29). The fourth bay has a window on the west and had originally another on the east. The fifth bay has a large fireplace in the east wall and beside it to the south an original doorway from without. But the fireplace is a fifteenth century insertion, and the doorway is closed by walling of the same date in which is a two-light window. This bay has also a west window, with a clumsily built inserted doorway in the angle and on the other side of the window a roughly made hole with a loop in the back.

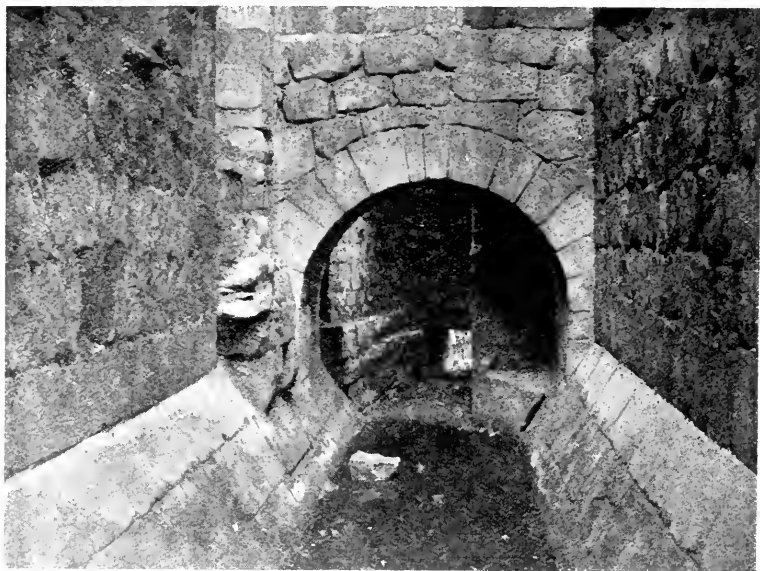
It is a matter for conjecture to what use the dorter subvault was put. By a process of elimination it seems at first to have been the novices' department, but the walled off northernmost bay must have served some other purpose, and in later times the rest may have so done likewise.

Next to the dorter sub-vault southwards and beneath the rere-dorter is a broad passage through the range, covered by a barrel vault. The doorways are plain and square-edged, and to the south of each is a small loop. In the north wall towards the west is a deep recess, and in the south wall at each end is a round-headed opening with shoots into the rere-dorter drain.

The drain of the rere-dorter is about 7 feet wide, but the three lowest courses of the side walls batter down to the flagged bottom so as to reduce the width there to 3 feet 10 inches (fig. 30). Where the drain passes through the main walls of the range a well-built square-edged arch is thrown over it. Its side walls are carried up to the first floor and at the east end support some remains of a barrel vault which probably carried the gangway from one side of the rere-dorter to the other. In the north side of the drain at each end are the shoots from the adjoining passage, each under a wide arch. The easternmost shoot had a corbelled-out seat over it. There is also a similar shoot at the west end of the south wall.

The last of the divisions of the eastern range of buildings is a chamber, also beneath the rere-dorter, about 9 feet wide and covered formerly by a barrel vault. It was entered from the west by a plain round-headed doorway of two square-edged orders, which has in later

times had a lesser segmental headed doorway built within it (fig. 31). In the east end is a narrow window and there was another in the south wall. In the north side towards the west is a garderobe with shoot into the drain. At some late period this chamber was made into a store, and had inserted over it a floor entered by a late doorway from the buildings east of it and lighted by a window in the south



Photographed by C. H. Bothamley.

Fig. 30. Drain of the monks' rere-dorter, looking east.

wall. A doorway has also been forced through the east wall below the original window there, so as to convert the lower story into a passage. Most of these features can be seen in fig. 32.

THE ABBOT'S LODGING.

According to the Cistercian *Consuetudines* the abbot was "to lie in the dorter, to eat in the guest-house ;"¹ but he must soon have got for himself a separate chamber under the dorter roof, and in course of time he moved out of it altogether. His new lodging seems, however, always to have adjoined or remained in connexion with the dorter, even if separated from it by the rere-dorter, to which it was usually attached. As this was technically part of the dorter, the abbot no doubt considered he was complying with the direction of the *Consuetudines*, and in some cases he may have continued to sleep in the dorter itself.

¹ "In dormitorio jacere, in hospitio comedere." *Consuetudines*, cx. *Nomasticon Cisterciense*, 198



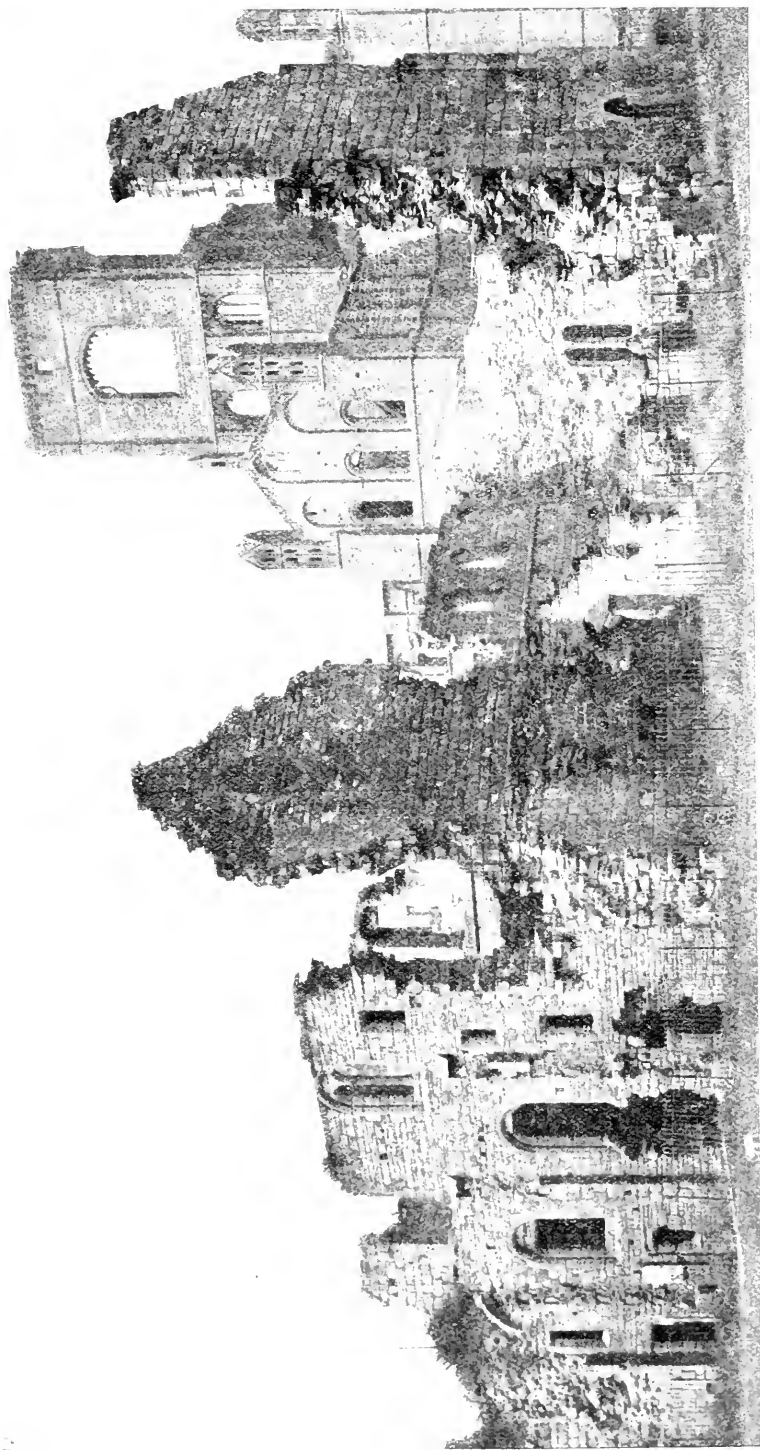
Photographed by H. Womald.

Fig. 31. Doorway of passage through south end of dorter sub-vault.



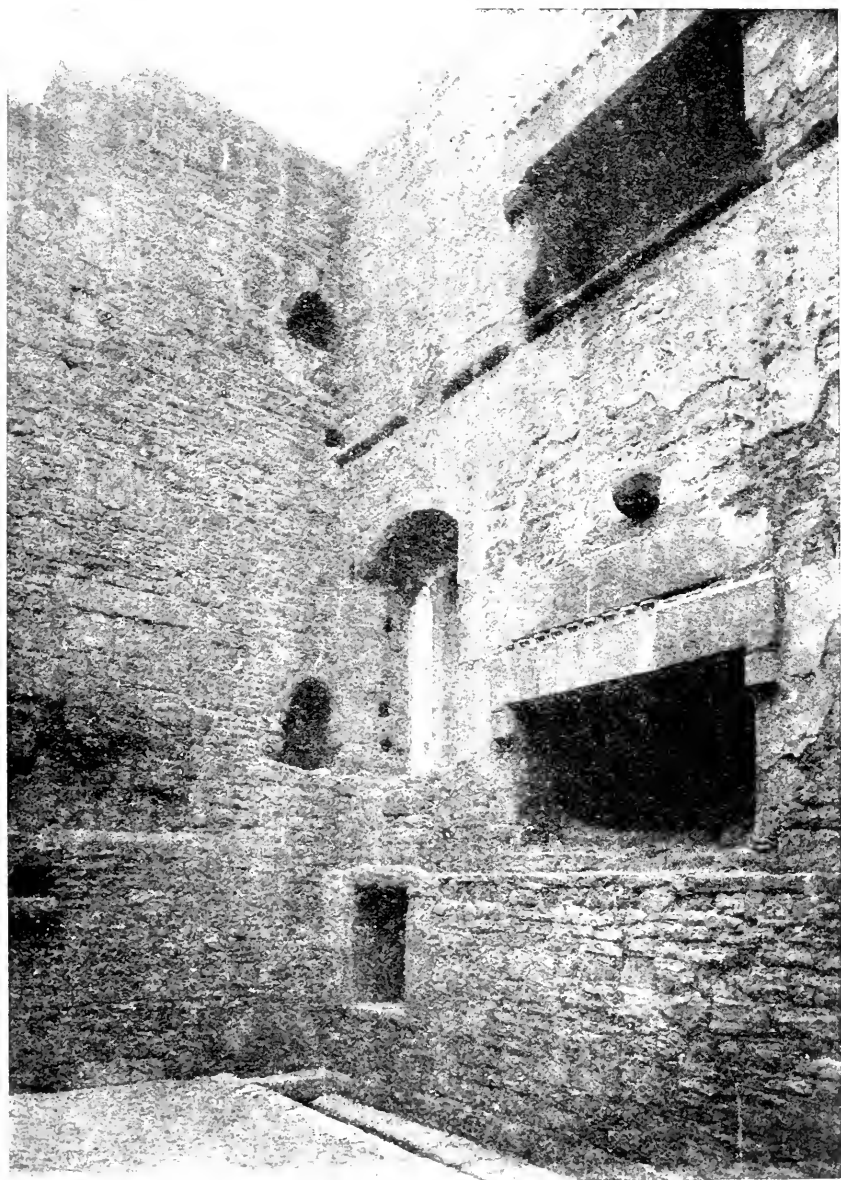
Photographed by C. H. Allanson.

Fig. 32. Original window and later doorways in passage at east end of dorter sub-vault.



Photographed by C. H. Bodhamley.

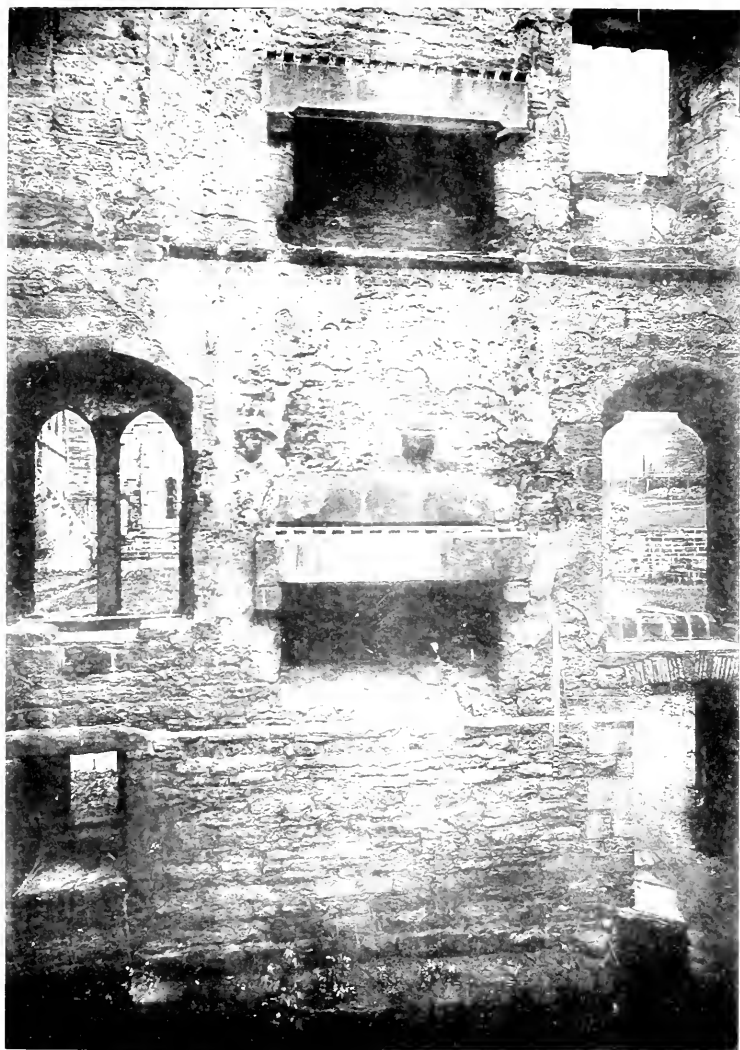
Fig. 33. Remains of the abbot's lodging, from the south-east (before the late repairs).



Photographed by Audrey B. Jones

Fig. 34. North west corner of abbot's lodging (interior).





Photographed by J. H. Lee

Fig. 35. Fireplaces and openings in north wall of abbot's lodging.



One of the earliest examples of a separate *camera* for the abbot is to be found at Kirkstall.¹ It is practically a three-storied house of a date *circa* 1230, extending eastwards from the monks' re-re-dorter as far as a two-storied building of somewhat earlier date, which was partly incorporated with it (fig. 33). The *camera* is not built quite at right angles with theorter range, but bends slightly to the south owing to its being in the same line with the earlier building to the east. Its southern frontage is exactly 50 feet. The lowest story or basement has on the east a solid block to carry the staircase to the upper floors, and then a passage 4 feet wide through the building. The principal division which follows is a room, 29 feet by 18½ feet, with north and south doorways towards the east and a square-headed light on each side towards the west (figs. 34 and 35). In the south-west corner is a small doorway from an end division. This has a wide entrance on the south and contained a stair up to the later upper room to the west of it; its north end is walled off from the drain.² This basement story probably formed the servants' hall.

The first floor was reached by a wide flight of stone steps which start some feet away outside the north wall and pass upwards under a round-headed arch; within to the right is its pointed entrance doorway. This opened into a lobby screened off from the principal chamber and lighted by square-headed loops at each end.³ Over this lobby or "screens" was a low gallery or loft lighted by like loops. There is nothing to show how this loft was reached. The principal room was the hall. It is lighted on each side by two large windows, each formed of a pair of lancet lights within a segmental-headed recess, enclosed externally by a round-headed arch; the dividing mullion was probably wrought pillar-fashion like a surviving example on the top floor (fig. 37). On each side of the window recess was a stone seat. Between the northern windows is an inserted fireplace of the fifteenth century with a deep horizontal embattled lintel⁴ carried by two small brackets

1. At Croxden almost a century elapsed after the beginning of the abbey before abbot William of Howton (1269-74), amongst other works, "edificavit egregie Cameram Abbatis superiorem et inferiorem." (Cott. MS. Faustina B. 6, f. 75b). At the same abbey in 1335 "construere cepit Dominus Ricardus de Schepish, Abbas xiijs de Crokesdeno novam cameram suam inter coquina m Infrimitorii et Dormitorium. Et anno sequente magnis sumptibus perfecit eam" (*Ibid.* f. 90). This later *camera* occupied the same position as that at Kirkstall.

At Meaux, there is no mention of the abbot's lodging until early in the fourteenth century, when abbot Roger of Driffield (1286-1310), intending to resign, "edificavit pro receptaculo suomet post abbatiam quandam cameram, que post illud tempus dicitur et est camera abbatiss; uti cernitur in presenti ab orientali parte infrimitorii monachorum" (Chronica de Meisa, ii. 238). On the deposition of abbot William of Dringhoe in 1353 there was granted for his use "unam cameram quam dominus Hugo de Lavena (abbot, 1339-49) fecerat pro cessione sua præpari, inter infrimitorium et dormitorium monachorum."

At Fountains, a block of buildings extending northwards from the east end of the re-re-dorter was converted into the abbot's lodging in the fourteenth century; and at Jervaulx about the same time a two-storied house for the use of the abbot was built on to the south side of the re-re-dorter.

2. Externally the southern front of the basement story was traversed by a wooden pentise, as may be seen by the corbels for its roof. This probably extended eastward along the front of the next building, as suggested on the plan.

3. In the ground story, as will be seen from the plan, there is the base of a shaft, with a drain running from it eastwards, which seems to have been carried up to the first floor. The object of it is doubtful, but it may have been for carrying off the refuse and dirty water of dishes, etc. cleaned within the screens. Its position seems to be against its being a garderobe shoot.

4. Large part of this is a recent "restoration."

(figs. 34 and 35). The back of the fireplace is formed of the usual tiles set herring-bone-wise on edge. The west wall has a pointed lamp niche towards the north, a wide inserted doorway in the middle (now blocked) with square head, and a narrower original door to the south. The middle doorway evidently communicated with the staircase outside it, and so with the added room west of it; it also led to a garderobe east of the staircase, over the drain. The other doorway

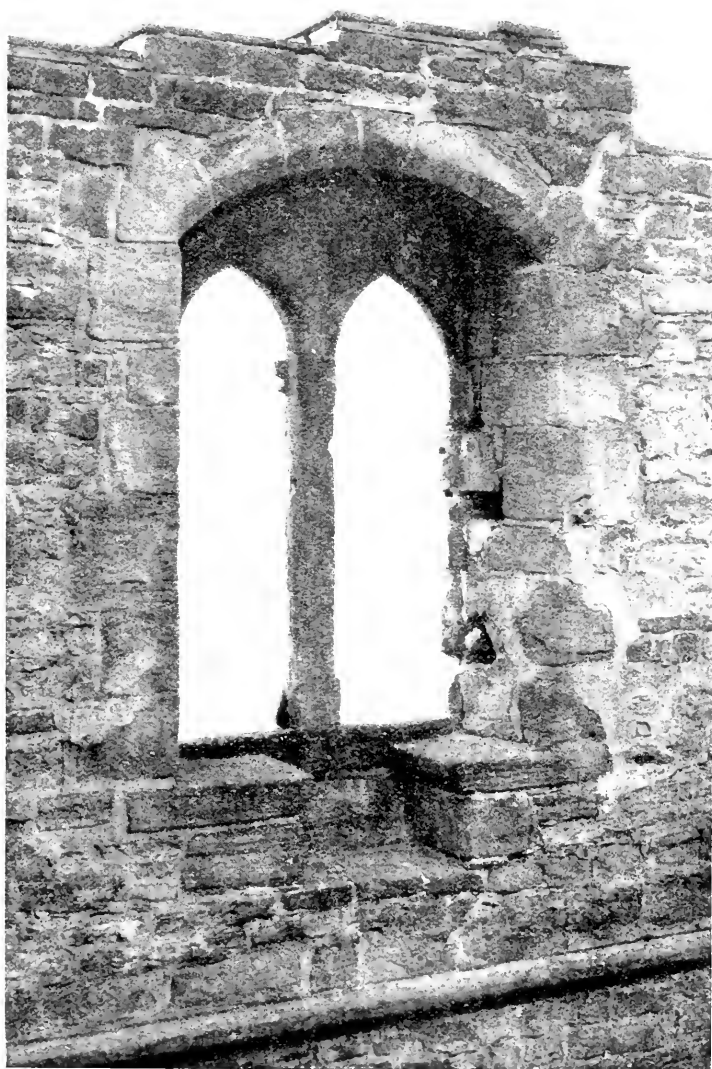


Photographed by Godfrey Bingley.

Fig. 37. Window of abbot's lodging (exterior).

from the hall led into a small room, lighted originally by two square-headed loops, one over the other, on the south, and extending northwards, before the staircase was made, to the garderobe.

The second floor was reached by a narrower wooden continuation of the main staircase returned northwards to a doorway in its north-east corner. This doorway opened into a lobby like the screens below, lighted by a small square window in each end, beyond which was the



Photographed by Godfrey Bingley.

Fig. 36. Window in abbot's lodging (interior).



solar. This was equal in size to the hall. In the south wall were two two-light windows like those in the room below. One of these is fortunately quite perfect, even to its stone side seats (fig. 36); of its fellow only the sill and jambs remain. The north wall also contains towards the east the opening of an original two-light window, but the lancets have been replaced by a three-light window of the fifteenth century (figs. 34 and 35). Next to this is a fireplace with a deep embattled lintel like that in the hall, and beyond it to the west a square-headed light, now blocked internally. The west wall has a pointed lamp-niche to the north, and further south where the wall has now gone was a doorway into a bedroom, with garderobe to north, over the rooms below. This west wall in part has been rebuilt.

The floors of the house were throughout of wood, and the walls were plastered. The roof was one of fairly high pitch.

Previous to the late "restorations" there existed at the southern end of the main staircase the remains of an arched recess in the wall, and outside it two brackets, apparently of a series, that carried a projection like a shallow oriel (fig. 33). Part of the head of this also existed above. The oriel probably contained a window to light the stair. Immediately to the east was a jamb of a doorway leading into the upper story of the next building. The recent cobbling up of this corner of the abbot's house has resulted in the remains of some interesting features being rendered almost valueless, but the oriel seems to have been built out to make room for the doorway east of it, though for what reason can not now be ascertained.

The building into which the doorway led belongs to the early part of the thirteenth century, but is unfortunately greatly ruined. Its western gable has been preserved through the abbot's house having been built against it, and part of the eastern gable is standing, but the north wall remains for only a few feet in height and the south wall is all gone. The building formed an oblong block, measuring externally 50 feet by 30 feet. The ground story was divided by a cross wall into two chambers of not quite the same size, each covered by a quadripartite vault resting on a middle pillar and on corbels against the walls. The eastern division seems to have been merely a cellar and has the vaulting corbels quite plain. It has a large entrance doorway on the north, and a smaller skewed entrance on the east. The windows must have been in the destroyed south wall, and there was probably a door in the south end of the cross wall between the cellar and the western chamber. The latter had moulded corbels to carry the vault, which seems to have had transverse ribs only. In the west wall are two lockers, and in the western part of the north wall a wide pointed entrance doorway. In the north-east corner was apparently a

fireplace, which has subsequently been altered and an oven constructed in the back. This division, like the eastern, must have been lighted by windows in the south wall. Of the upper story only the ends remain. The eastern gable has, high up, the jambs of a tall lancet window, and adjoining it on the north one side of a shouldered entrance doorway. The western gable contains the remains of the narrow doorway from the abbot's house and has high up a pointed-oval window-opening with a buttress below outside. Over the window is a small blocked quatrefoil (see fig. 33).

There can be little doubt that this block originally formed part of the infirmary, and consisted of a kitchen and cellar below, with a chapel on the upper floor. The east wall of the latter shows no signs of an altar, but there are two pinholes for holdfasts for a panelled reredos behind it. After the building of the abbot's house the kitchen could easily have continued to serve both it and the infirmary, and the skewing of the lowest steps of the abbot's staircase on the kitchen side points to such a use. There could also have been no difficulty in the infirmary chapel being used at need by the abbot, who had his own door into it.

THE INFIRMARY.

The monastic *infirmatorium*, infirmary, or farmery as it was generally more shortly called in England, was, as its name implies, not only the hospital for the sick, but also the home of the infirm monks, and of those who had been professed fifty years (*sempectae*). It was, further, the temporary lodging of the *minuti*, or monks who had been let blood. Among the Cistercians this operation was undergone by the monks in companies four times in the year, usually in February, April, September, and about Midsummer Day, but not in Advent or Lent, nor the first three days of Christmas, Easter, and Pentecost, nor during harvest. For the accommodation of these several companies, an establishment of some size was necessary, and the great infirmaries at Canterbury, Peterborough, Fountains, and Kirkstall were probably fully tenanted when the monastic fervour was at its height. According to the *Consuetudines* the Cistercian *minuti* did not go into farmery, but stayed in the cloister and took their meals in frater. But probably by the time these infirmaries were built at Fountains, Waverley, Kirkstall, and elsewhere, they were used in the same way as in other Orders. In later times, when the number of monks had diminished, the infirmary seems to have been devoted to other purposes as well.

The infirmary buildings at Kirkstall, when first erected early in the thirteenth century, seem to have consisted only of the great hall, and the chapel and kitchen block described above. The hall stood some fifty feet away to the north of the latter, and the two were probably

connected by one of those wooden structures which were so extensively used for such purposes in mediaeval times.

The hall itself, possibly to avoid encroaching on the cemetery north of it, was built so as to form a considerable angle with the main ranges of buildings. It was 83 feet long, and consisted of a nave 31 feet wide, with a south aisle¹ about 11 feet wide separated from it probably by a row of wooden posts to carry the roofs. The main entrance was in the west wall of the nave, but there is a smaller doorway about the middle of the south wall. In the north-east corner of the hall is an ample fireplace. The building has, however, been so much ruined that its walls nowhere remain to a greater height than 3 or 4 feet, and it also underwent considerable alterations, first in the fourteenth and again in the fifteenth century, all of which have tended to obscure the original arrangements. But probably the hall was used for meals and exercise, and along the aisle were disposed the beds. As the regular kitchen was some distance away the fire-place in the north-east corner may have been used for cooking purposes.

The first of the later changes in the infirmary was probably the remodelling of the hall. This was now rearranged, the old wooden division between nave and aisle being replaced by a stone arcade, and a north aisle formed by the building of a second arcade about 10 feet from the north wall. Each arcade was of four arches, but to obtain proper abutment for these on the west the fifth bay was built solid, perhaps because there was some strong reason against building external buttresses. At the east end this was actually done, but the building of the buttresses involved the reconstruction of the whole of the east wall.² The new arcades were carried by octagonal pillars with somewhat singular capitals and bases. The latter do not stand on the ground, but are perched up on square pedestals with the corners sloped off. Some, at any rate, of these pedestals may have been the bases of the wooden posts of the earlier division.

The only other internal features of the fourteenth century are apparently a fireplace in the western half of the south aisle and a corresponding one opposite in the north aisle. Externally a porch seems to have been built outside the western entrance but for some reason it is not symmetrically placed with regard to the door.

Another important fourteenth century addition was the building³ (see plan) that connects the hall with the chapel block. Only the lower courses of this now remain, but they show that it was a two-

1. The line of this is indicated by the original buttress against the west wall.

2. It may be that the original hall was actually a half-timbered structure.

3. This building is at right angles to the hall, but as hall and chapel block are not quite parallel, it makes a somewhat awkward angle with the latter.

storied structure. There are reasons for supposing that it replaced an earlier structure of wood. The ground story is about 17 feet wide and three times as long, with a passage way through its northern end and a larger and a smaller doorway, not quite opposite each other, at the southern end. Outside the west wall are the bases of two chimney breasts for fireplaces on the upper floor. About the middle of its length the building is traversed obliquely by the main drain, and as there is no other place available, it seems probable that the northern part of the block was walled off from the rest and had over the drain a row of privies for the use of the infirmary inmates.¹ The southern part of the block had its own entrances and no doubt was put to some good use. The upper story appears by the single western buttress to have consisted of at least two large chambers, each with a fireplace in its western wall. As the fireplace at the north end seems to have been smaller than the other, the southern room was perhaps a little hall and the northern a solar or bedroom. As there are no signs of any staircase to the upper floor, it was probably reached by an external wooden stair on the western side, so as to place it in communication with the kitchen. There is a corresponding lodging to this and of similar date attached to the infirmary hall at Fountains, and since in both cases the abbot of the house had his own separate *camera*, this at Kirkstall may have been used by the father-abbot of Fountains or his deputy when he came to hold his annual visitation of the abbey. Like the Fountains example it had a door of communication with the infirmary chapel.

The infirmary hall, when first built, was no doubt connected directly with the cloister by a wooden gallery or pentise extending from the passage out of the cloister to the hall door.² When the abbot's house was built this gallery was replaced by another of stonework, from which a second gallery, also of stone, branched off to the entrance of the new house. As the abbot's gallery is built parallel to the dormer range it issues from the infirmary gallery at an obtuse angle, and also forms another angle where it joins the abbot's house. Only the lowest courses of the walls remain, but it is probable that, like the corresponding passages at Fountains, the walls towards the dormer supported a series of open arcades, with solid piers and buttresses at regular intervals to help them to carry the roofs. The opposite walls were probably solid. During the fourteenth century alterations the hall passage was twice disturbed, once when the porch before the hall doorway was built, and again when a chamber was built outside its western end in the angle formed by the chapter-house and dormer

1. The similar establishment which must have been attached from the first to the infirmary hall was probably a wooden structure, built more symmetrically with regard to the drain.

2. The marks of it may be seen against the dormer wall.

range. This chamber, which was probably entered from the parlour, had stone benches along its north, east, and south sides and part of the west, and was lighted by windows, one of which remains, in its east wall. The south end projects somewhat into the infirmary passage and was apparently closed in there by a wooden partition. Its use is conjectural, but as it is directly in communication with the cloister and was seated nearly all round it may have been used for some purpose (? a school) by the novices.

Owing to the difficulty of distinguishing, when nothing remains but a few courses of mere walling, the works of the fourteenth and fifteenth centuries, it is not quite certain that all the works set down to the latter period actually belong thereto. But about the majority, as the jointing and other features show, there can not be any doubt.

And first with regard to the alterations to the hall. As early as the fourteenth century the gradual decay of the original strictness of the Order, and the increasing desire for more privacy and comfort, had resulted first in the aisles of the infirmary halls being divided up into cubicles for the beds, and then in these being converted into private rooms. There is ample evidence of this at Fountains and Waverley, as well as in the Benedictine houses, as at Canterbury, Peterborough, and Ely. Of such alterations there is even documentary evidence at Meaux, where abbot William of Scarborough (1372-96), "*cameras privatas in infirmitorio monachorum separari et inhabitari per singulas instituit.*"¹

The fireplaces in the aisles show that "privy chambers" had already been formed in the infirmary hall at Kirkstall in the fourteenth century. When, therefore, more such were needed room had to be found for them elsewhere. This was done by walling up the arcades and then converting the aisles into two-storied series of rooms. To gain access to those on the higher level a staircase to those on the south side was built out in the hall against the wall blocking the third bay, and to those on the north side in a corresponding position in the north aisle. Outside the south wall, in the westernmost bay, is the base of a chimney to one of the new rooms on the upper floor.

Much about the same time a new kitchen, with appendent scullery, was built on to the north-east part of the hall, and furnished with doors of ingress and egress placed side by side; the latter may, however, have been also a serving hatch. As the kitchen and scullery are reduced in most places to mere foundations, it is impossible to say more about them than is disclosed by their plan. East of the kitchen there seems to have been a pentise about 8 feet wide between the hall and the scullery.

1. *Chronica de Melsa* (Rolls Series 43), iii. 224.

Several other changes were also made in the minor buildings of the infirmary. One of these was the substitution for the old wooden staircase of an external stone stair up to the visiting abbot's lodging, and the consequent blocking of the small doorway underneath it. A fair sized room, measuring about 24 feet by 13 feet, which may have taken the place of an earlier wooden porch, was also built in the angle formed by the abbot's gallery and what may be called his kitchen.

A new doorway was made from this on to the stairs to the abbot's lodging, and in its east wall was another doorway, with a window further north. Some important additions were also made to the passages or galleries that connected the abbot's house and the infirmary hall with the cloister. One of these was the building of an upper story, probably only a wooden or half-timbered structure, upon the western half of the hall passage.¹ A small vice to give access to this was built on the south side against the dorter wall, and as the added blocks on the same side show, there were two fireplaces on the upper floor. Part of the north wall was rebuilt and with it was carried up a shaft for a garderobe. Most of the north side is also overlapped by a new building. This consisted of a room measuring about 18 feet by 15 feet, with a doorway from the passage, and an upper room of the same size. This had a fireplace on the west side and was reached by an external staircase against its east wall.² What these new rooms were for is a matter for conjecture, but the added gallery over the hall passage was probably the library. Whether it was continued eastwards as far as the hall there is nothing to show. A similar upper story must also have been built, probably as a gallery or "walking place" over the passage to the abbot's house. A chimney block on the west side close to the house itself shows that the new gallery had at any rate one fireplace in it, but unless there was a way into it from the solar level, it is difficult to see how the abbot could have entered it. When the chimney block was built a wall was carried obliquely westwards from it to allow of the lower story of the passage being widened out to cover the doorway into the servants' hall.

At a still later date a few other changes were wrought in and about the infirmary. One of them was the addition of a scullery to the east of the added room north of the abbot's kitchen, with a shoot in its north-east corner into the drain below. Another was the insertion of a cross wall, with a doorway in it, under the northern part of the visiting-abbot's lodging, apparently to carry another wall above, and the building out eastwards of a large half-octagon oriel; the oriel itself was of course on the upper floor. In the infirmary hall the

1. The mark of its high-pitched roof may be seen against the dorter.

2. A chamber of late date occupies a relative position against the infirmary passage at Fountains.

eastern part of the south wall of the south aisle was taken down, and rebuilt with increased thickness a little further south, but for what object does not appear. There was a window in it, and the room which this lighted has a fireplace in the east wall. The upper room may have been a new infirmary chapel, to obviate the necessity of passing through the visiting abbot's-rooms in order to reach the older chapel. To the west of the hall other changes were made. One was the formation of a prison in the west end of the south aisle, by walling off the last bay and lowering the floor. Entrance to it was through a new door in the west wall, which was also covered by a porch with descending steps extending southwards from the hall porch. Running westwards from the prison porch are the foundations of what, from analogy with similar structures in corresponding positions at Fountains, Waverley, and Beaulieu,¹ must have been a laver or conduit.² At Fountains it takes the form of a considerable room in the middle of which the conduit stood, but at Waverley, Beaulieu, and Kirkstall, it was a long and narrow structure, probably with a laver and taps for washing below, and the cistern overhead. The remaining addition was a small building with external entrance, attached to the north end of the new *camera* near the chapter-house, and to the buttresses of the chapter-house itself. From the thickness of its walls it seems to have formed an extension of the upper part of the new *camera*. The lower portion may have served as the place where the sexton kept such tools, etc. as were used in the adjoining cemetery.

THE WARMING-HOUSE.

At the extreme east end of the south wall of the cloister is a wide pointed arch of early thirteenth century work, within which has been built a much smaller doorway of later date, now blocked (fig. 38). An examination of the adjoining wall shows that the thirteenth century archway is itself an insertion, in place of a wide round-headed opening of twelfth century date.³ There was also another such opening, also of the twelfth century, a few feet to the west, but this again is inserted in an older wall; its hood-mold has subsequently been cut away and the arch walled up.

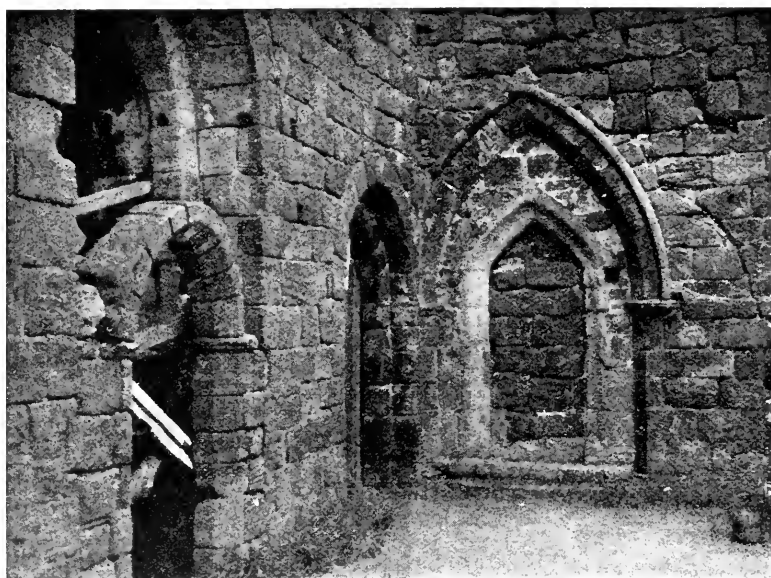
It has already been pointed out that the original day stair to the dormer on the east side of the cloister had eventually been done away with. In its stead a new stair was made on the west side of the dormer, and the thirteenth century archway just described was inserted to

1. H. Brakspear, *Waverley Abbey*, 64.

2. The octagonal building in which was the main conduit head in the monastery of Christchurch, Canterbury, is still standing on the south side of the infirmary cloister there.

3. The jamb stones and voussoirs of this have been taken out, and the opening itself walled up some time before the thirteenth century arch was inserted. The blocking is, in fact, of the same date as the Norman doorway west of it.

give access to it. The stairs themselves, as may be seen on the southern side of the archway, were carried by a block of masonry, solid as to its northern half, but with openings under when the stairs rose high enough to allow them (fig. 39). At the top of the stairs, which started in the cloister, was an entrance into the dorter. In the fifteenth century, when the arch from the cloister was reduced to a doorway, another doorway was pierced in the west side of the dorter stair, with a descending



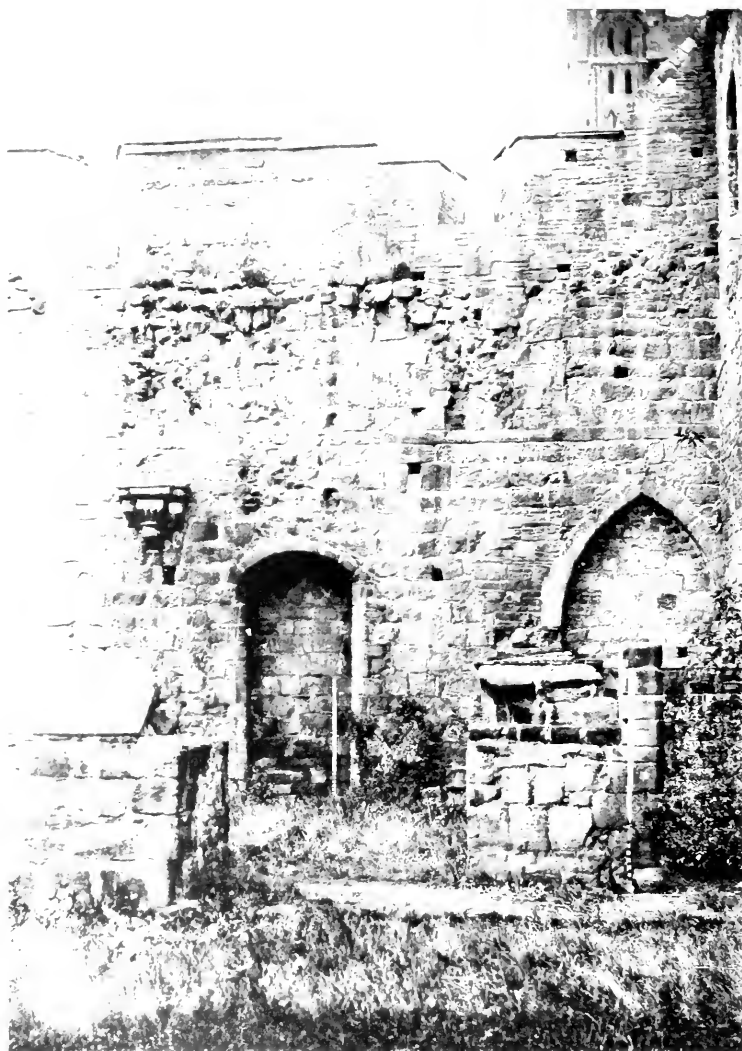
Photographed by C. H. Bothamley.

Fig. 38. Doorways in south-east corner of the cloister.

flight of steps. These led into a spacious room, which was the warming-house, or *calefactorium*, so called from its being the place where a fire was provided for the monks to come and warm themselves at in winter. Before the construction of the doorway and steps just noticed it was entered from the cloister by the wide doorway in the north wall.¹ At first the warming-house was 34 feet long and 30 feet wide, but its length was curtailed 10 feet by the building of the new dorter stair;² the loss was, however, partly made good by utilizing the space under the southern half of the stairs. There are some indications of the half of the room which includes this space being walled off from the rest, but for what purpose is not clear. An original doorway on the south formed a separate entrance into it. The rest of the room was the

1. The segmental rear arch of this seems to be later than the Norman work visible in the cloister (see fig. 39).

2. In the solid end of this stair, on the warming-house side, is a square locker or cupboard.



Photographed by J. H. Radcliffe.

Fig. 39. North side of warming-house, showing original window sills, etc.

warming-house proper and had in the west wall an ample fireplace with a great hooded chimney carried on corbels and a hearth of flags set on edge with stone fender. At each end of this west wall is an inserted fifteenth century doorway, and in the south wall is an inserted doorway from without of the twelfth century, and over it part of an original window. Further east a remaining fragment of wall has a bit of the sill of a fifteenth century window.

The warming-house was vaulted, but it is not quite clear how the vault was arranged. There is a corbel in the south-west angle, and on the north wall besides a corner corbel to the west and a compound corbel further east. there are plain marks of the vault having had a wide middle and narrower end spaces (fig. 39). The west wall has gone and there are no signs of the vault against the east wall. A little consideration will show that if the vault was of two spans only from north to south, one of the two pillars needed for its support in the middle of the room would have come very awkwardly in front of the fireplace; whereas if it was of three spans spaced unequally like the others, although this would involve four pillars, the latter would stand less awkwardly. Moreover since the erection of the dormer stair necessitated the removal of at least two if not of all the compartments of the vault against the east wall¹ it will be seen that the stair wall not only carried one line of the transverse ribs, but that a supporting pier is carried up exactly in the place of a south-east fourth pillar. There can therefore be little doubt that the vault was of nine compartments as indicated on the plan. The supporting pillars probably resembled those of the dormer sub-vault.

In the yard to the south a slanting groove on the dormer wall shows that the warming-house was partly overlapped by a lofty pentise of 15 feet projection. How far it extended westward is uncertain, as there is no trace of it against the frater. It probably served as a wood store for fuel.

Over the warming-house was a room entered by a doorway from the dormer, with two narrow windows in its north wall. Of its west and south sides nothing is left, and not very much of the other two. It probably served as the muniment room.

Immediately to the west of the old warming-house entrance are some interesting remains of the lavatory where the monks washed before going to their meals in the frater. These remains consist of the two arches at each end of a series that was originally eight in number. The arches are trefoiled and moulded and were carried by moulded brackets, except at each end where the last arch rested

1. This removal explains the absence of corbels against the east wall, since they would be cut away or removed when the new stair was built.

on a short detached shaft with the nail-head ornament round the capitals (fig. 40). As the recess is only 1 foot deep, there is not room enough under the arches for a cistern and the water was evidently laid on by a pipe fixed along the back with taps projecting from it at regular intervals over the stone trough beneath. Part of the trough, with a hole for fixing the pipe above, remains in the easternmost arch.

THE FRATER AND MISERICORD.

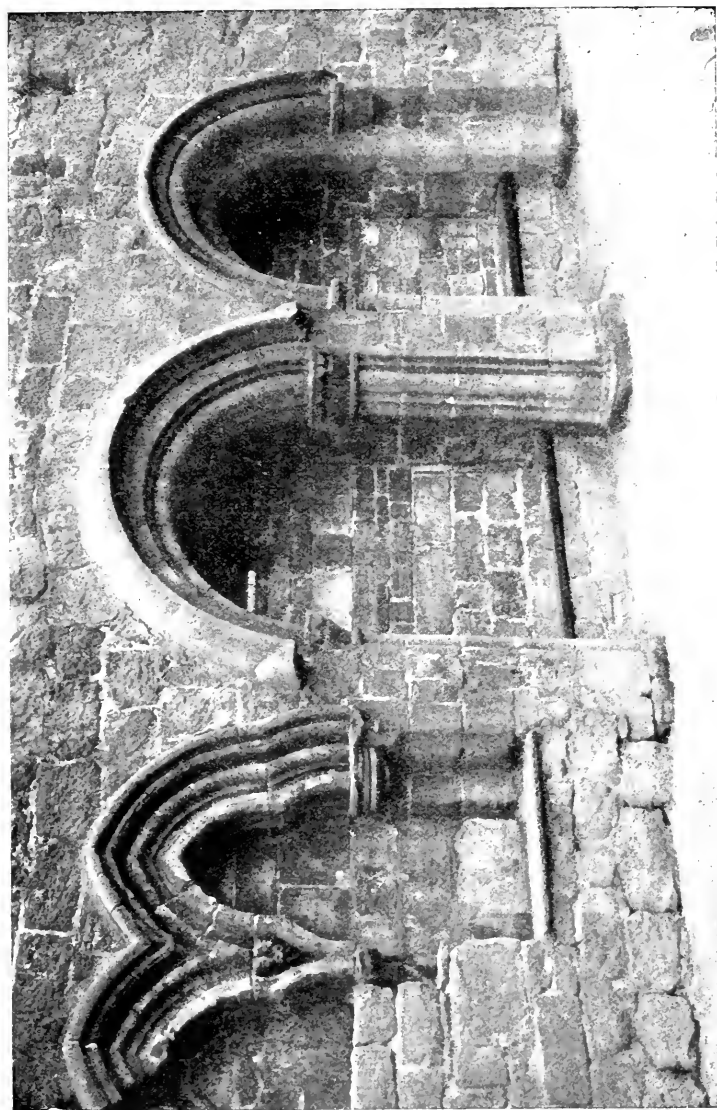
According to the direction for the Sunday procession the next building to the *calefactorium* was the *refectorium* or frater,¹ where the monks took their meals. At Kirkstall there are, next to the lavatory, two doorways side by side that opened into it (fig. 40). Both doorways are built up of twelfth century stones, but the easternmost, which is somewhat the wider, has a heavy hood-mold of fifteenth century work. Careful examination shows that both doorways are insertions in an older wall.

The frater itself is a work of the same date as the westernmost of the two doorways into it, and following a fashion peculiar to the Cistercians, stood north and south with one end abutting on the cloister. It was 31 feet broad and nearly 100 feet long. In the north wall are two plain round-headed windows (fig. 41). Of the east side the part towards the warming-house has all but gone, and the remainder, though original in substance, now contains no original features. The south end has gone. The west side had, until the late repairs, a breach at the north end showing one side of the serving hatch from the kitchen (fig. 42). Further south is a broad and deep round-headed wall-recess for a cupboard, and just beyond this, high up, is the springing of an arch that formerly spanned the room in line with the outer walls of the warming-house and kitchen.² At the middle of this side, below and in the sill of a later window, may be traced the jambs of the doorway that led up to the wall-pulpit, and above it is one of the jambs of the arcade that formed the front of the passage to the pulpit itself (fig. 43). The southern jamb of the other end of the arcade can also be made out further south. The rest of the wall has been so altered and ruined that all other original features have been obliterated,³ but outside there is a broad projection representing the southern half of that which contained the frater pulpit. It contains one blocked Norman window and part of another.

1. The Old English word "frater," for a monastic dining-hall, is at least as old as the thirteenth century, and is borrowed directly from the Old French *fratrium*, a shortened form of *refractor*, derived from the Middle Latin *refectorium*. See *A New English Dictionary*, iv. 515, s.v. Frater. At Carlisle, the old hall of the Black Canons who served the cathedral church there is called "the frater" to this day.

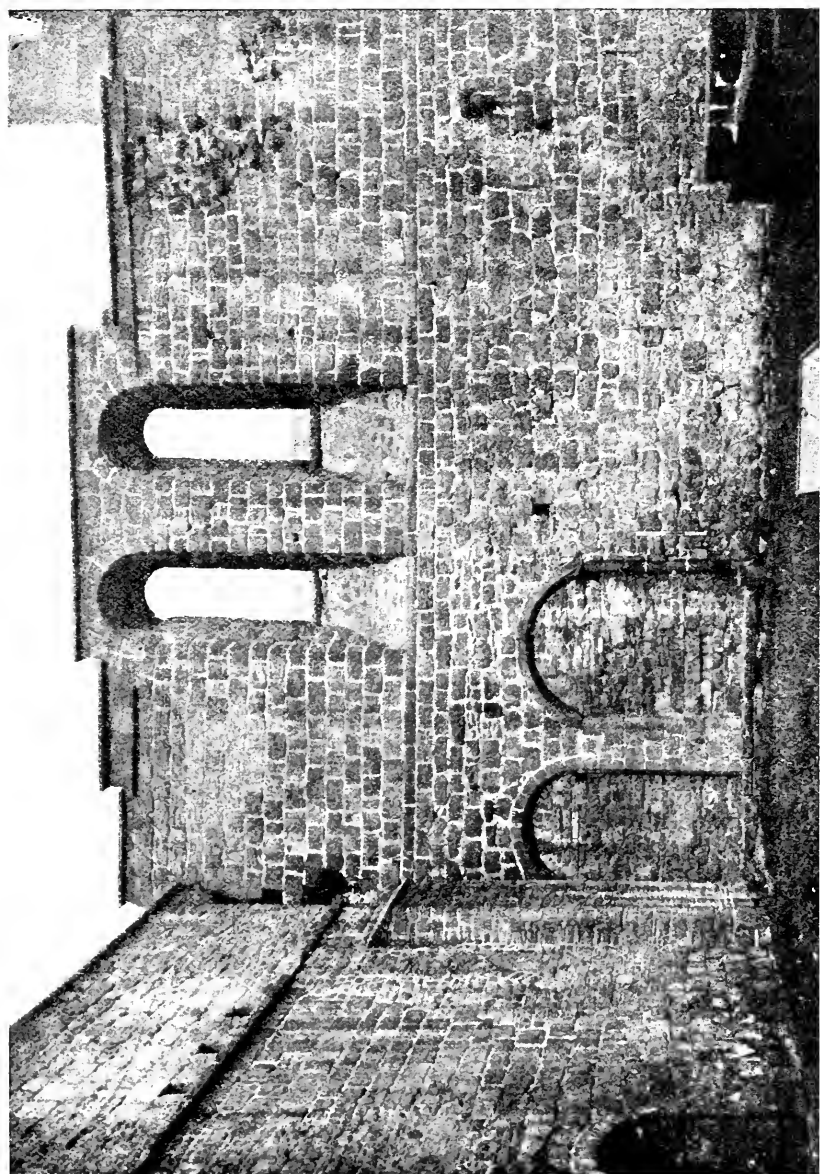
2. The object of this unusual feature is not quite apparent, but it may have been in order to keep in position the old roof of the original frater. (See *post*).

3. Close to the south end of the west wall there was a round-headed opening from without on the ground level, which has been "restored" in the recent repairs. It was probably a barrow hole, and walled up after the completion of the frater.



Photographed by Godfrey Bingley.

Fig. 40. Part of the remains of the lavatory, and frater and misericord doorways.



Photographed by Godfrey Bingley

The northern end of the west wall, beyond the springing of the cross arch, retains part of an original string-course, along which, in the course immediately above, is a series of holes at regular intervals¹ (fig. 42). Just to the south of the springing is a larger hole at the same level. These suggest that the part of the frater west of this point was cut off from the rest by a tall screen or partition which carried a loft or gallery extending back to the north wall. The part so cut off would thus correspond to the "screens" of a domestic hall.



Photographed by C. H. Bothamley.

Fig. 42. Remains of west side of frater and misericord (before the late repairs).

The loft must have been reached by a wooden stee or ladder. There is nothing to suggest that the roof was other than an open wooden one, probably of lofty pitch, like the other old roofs in the abbey.

For the history of the extensive changes that have been made in the twelfth century frater, it is necessary to consider certain points in the constitutions of the Cistercian Order.

According to the customs in force down to 1240, it was directed that "within the monastery let no one eat flesh or anything fat, except the sick and workmen."² and by an institution of general chapter between 1240 and 1256, this rule, which seems to have been originally

1. Three of these have survived the recent repairs (fig. 41).

2. "Intra monasterium nullus vescatur carne aut sagimine, nisi omnino infirmi et artifices conducti." *Consuetudines, sectio ii. § xxv. Nomasticon Cisterciense, 218.*

adopted in 1157, was re-enacted in more precise terms.¹ But within a hundred years later circumstances had so far changed that by a constitution of Pope Benedict XII. in 1335 the monks were allowed, under certain conditions, to eat meat in the infirmary, and by invitation with the abbot in his lodging. By the end of the fifteenth century it had become the general custom for the monks to eat meat three times a week, on Sundays, Tuesdays and Thursdays, except in Advent, Septuagesima, Lent and other seasons of fasting; while on the other days they were restricted to the vegetarian diet prescribed by the older rules. But the relaxation in favour of meat did not permit it to be eaten in the frater, nor to be cooked in the common kitchen, it became necessary therefore to provide a special hall, or "misericord," as it was called, for the purpose. As the first indulgence was at first permitted only in the infirmary, the new chamber usually formed part of that establishment. as at Waverley and Fountains, the meat being cooked in the infirmary kitchen. At Clairvaux, where it was also in the infirmary, it was called in 1505 "le reffectoir gras, pour ce que lesdicts religieulx y mengent chair les dimenches, mardy et jeudy . . . et à costé dudit reffectoir bas est la fenestre par où l'on sort de la cuysine, appelée la cuysine grasse."²

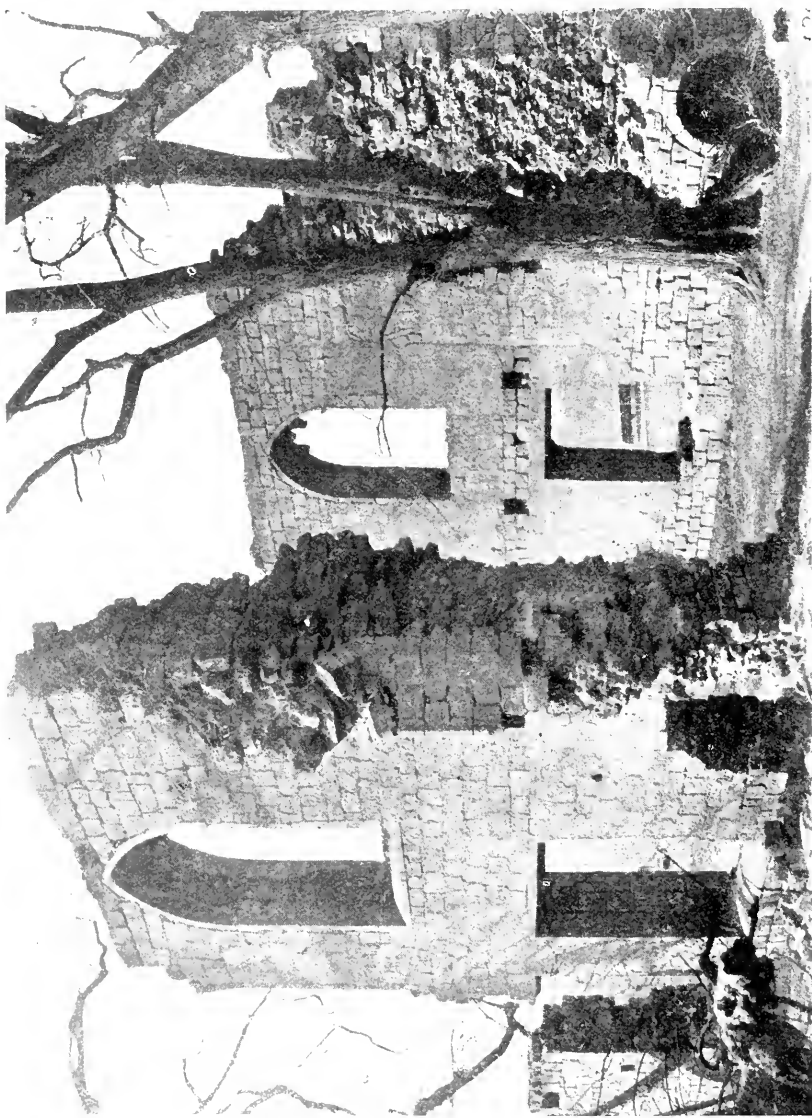
But at Kirkstall the case was met in another way, by dividing the frater into two stories, and using the lower as the misericord and the upper as the frater. A new meat kitchen (*la cuysine grasse*) was also built on the south-east to serve the misericord, while the frater (*le reffectoir maigre* as it was called at Clairvaux) continued to be served from the old kitchen (*la cuysine maigre*). These changes, as the style of the work shows, were made towards the end of the fifteenth century.

In the lower hall the first thing was to provide it with a separate entrance from the cloister; an old doorway was accordingly removed from elsewhere and inserted immediately to the east of the old frater doorway. The partition forming the screens was removed, or perhaps cut down and moved further north³ so that the doorway from the warming-house might be made south of it. Another doorway also opening from the warming-house was made at the same time against the north wall. Beyond the cross arch there was made in the east wall a small doorway opening towards the wood shed, and a little further south two new windows were inserted. At the extreme

1. "Nulla persona Ordinis nostri extra infirmitoria nostra carnes comedat, etiam jussu alicujus Episcopi vel praelati . . . In ipsis autem infirmitoriis, nullus Abbas, monachus, vel conversus pro minutione, solatio, consortio alicujus, aut aliqua occasione, nisi, quemadmodum in Regula continetur, omnino debilis fuerit aut agrotus, carnes audeat manducare." *Institutiones Capituli Generalis* 1240 et 1256, *Distinctio* xiii. § i. *Nomasticon Cisterciense*, 349.

2. Didron, *Annales Archéologiques*, iii. 229.

3. A hole over the new entrance doorway for a beam which could have rested only on some such partition suggests that the screen was retained in some way.



Photographed by Godfrey Bingley.

Fig. 43. Remains of east and west walls of frater and misericord (before the late repairs).

south end another doorway was made for service from the new meat kitchen, and just northward of it was a third new window.¹ As the south wall has gone it is impossible to say whether it contained windows or not. The west wall, south of the cross arch, has two new windows and between them the gap for a large fireplace, of which only the stone-curbed hearth remains, laid with slabs set on edge (fig. 42). All the new windows were square-headed and of three cinquefoiled lights. Just above them may be seen the line of the inserted floor.

The upper hall must have been reached by a wooden stair against the west wall, leading up from the old doorway in the cloister, and leaving sufficient room at the bottom so as not to interfere with the hatch from the kitchen. It was lighted by (probably) three windows on the east side, and by two on the west, with a fireplace between them as in the misericord below. As there was more headroom upstairs the new frater windows had pointed heads and were of three lights with tracery above² (figs. 42 and 43). Since the south wall has gone it is impossible to say what windows it contained or whether the alterations just described included a new roof of less steep pitch than the old frater had.

The walls of both misericord and frater were plastered throughout, and not panelled.

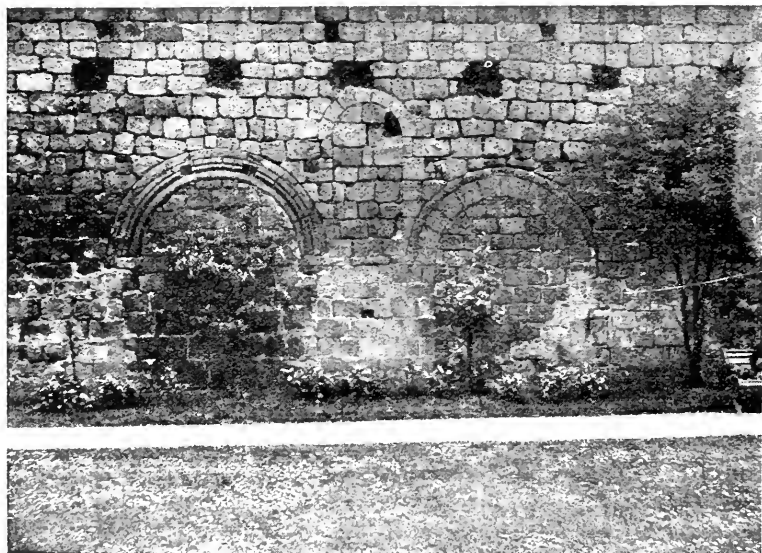
THE MEAT KITCHEN.

The meat kitchen is much ruined, but enough is left to show its main arrangements. It was 34 feet long and 26 feet wide, and so fitted in between the misericord and the rere-dorter that its north and west sides were built in line with the south and east walls of the former, and its east side was mostly formed by the rere-dorter itself. On this east side there was a wide opening into the drain for getting rid of dirty water, etc. and another, which was now furnished with a new doorway, into the lower part of the southernmost division of the rere-dorter. Just south of this doorway is a recess or cupboard in the wall, and beyond that a window facing east. In the south-east corner on the floor are the remains of an oven, which was apparently worked by an opening through the south wall. Next to this is a small doorway with stepped sill, leading southwards, and beyond it to the west a long recess or cupboard. The last feature on this side is a segmental-headed doorway, 6 feet wide, that led to a southern annexe of some kind, which has totally disappeared. It was of the same length as the kitchen, but its width cannot be recovered. The only remaining feature is an almy or cupboard at the floor level just to the west of the smaller doorway. The west wall of the kitchen has

1. In the late repairs this has been given a pointed head.

2. One of the western windows is still complete, except as to its tracery, and one of the east windows was in like condition until damaged by the recent fall of a large elm tree.

a small doorway from without towards the south, but most of its length is filled with a wide and deeply recessed fireplace. The north wall has on the west a small serving door towards the hall, then a wide and deep fireplace with an oven, $3\frac{1}{2}$ feet in diameter, in the left side, and beyond the door and sill of a great oven about 7 feet in diameter which projects into the yard at the back. The walls do not stand high enough to show any remains of an upper series of windows, or how the building was covered in.



Photographed by C. H. Bothamley.

Fig. 44. Original frater and kitchen doorways.

Outside the kitchen on the north was a broad pentise covering the service door into the hall, and returning sufficiently far along the dormer subvault wall to cover the inserted doorway in the south-west corner of the subvault.

THE OLD KITCHEN.

In the cloister, to the west of the misericord and frater entrances, are two blocked round-headed doorways about 6 feet apart (fig. 44). The easternmost of these, which is slightly the larger, is an original doorway of the same date as the wall in which it is set. It is simply moulded and once had detached jamb shafts to carry the outer order, but has had the hood-mold chopped away. The other doorway, which has also lost its hood-mold, is of much plainer character, but of the same date as its neighbour. Between the doorways, and starting just



Photographed by Gudrey Bingley.

Fig. 45. Interior of the north wall of kitchen, showing first doorway from cloister and original frater doorway, and sills of early windows.

above their springing line, is a large and deep plain round-headed niche, also original work, now blocked (fig. 44). The westernmost of the two doorways opened into the kitchen. This was 30 feet wide and 40 feet long from east to west, and has in the north wall, besides the two doorways, a tall cupboard recess to the west (fig. 45). All three openings have hood-molds, but that over the larger doorway is plain and flat, and not keeled like the others. The east wall has been lately refaced and now shows very few traces of old work. The south wall, which contains the windows, has below them a deep and broad recess to the east, the rear arch of a wide doorway¹ about the middle, and an inserted skew door on the west leading outwards (fig. 46). Above are two pairs of round-headed windows² which externally are set in the backs of tall recessed panels with semicircular heads (fig. 47). In the heads of all four panels were small windows, two of which remain,³ that lighted a room above the kitchen vault. The west wall is much ruined. It has the remains of a small inserted oven at the south end, beside which is a small doorway, also an insertion, from without.⁴ Further north is the lower part of a deep recess or cupboard 4 feet 8 inches wide, and against the north wall, intruded from the other side, is the base of a large oven or drying kiln. The fireplaces, of which there must have been two, stood back to back in the middle of the kitchen, as at Fountains. All remains of them have disappeared, but during the excavations that preceded the recent repairs some fragments of the hearths were found, with strong traces of fire; unfortunately they were destroyed by the workmen before they could be planned. The kitchen was vaulted, in two long spans from east to west, north and south of the chimney, and by two wider half-groins between abutting on the chimney itself. The vaulting corbels that remain in the side walls are like those in the warming-house (figs. 45 and 46). In the yard to the south there was a pentise against the kitchen wall under the windows, which was returned southwards along the frater, as the remaining corbels show. It probably served as a wood store, etc. As will be seen from the plan the kitchen yard was crossed by the main drain.

THE FIRST FRATER.

During the detailed examination of the abbey buildings made by the writer in view of the present paper, a curious fact came to light in

1. The outer arch of this has been torn out. Both the doorway and the recess east of it are insertions in an older wall.

2. For some unexplainable reason, the second and third windows are a little taller than the first and fourth.

3. The easternmost of these is an insertion, as was probably the lost one east of it. The two earlier windows to the west originally opened into the kitchen itself, before it was vaulted.

4. These probably take the place of a large serving hatch towards the frater of the lay-brothers, set in the back of a deep recess, part of which remains to the north.

connexion with those forming the southern range, namely, that the warming-house, frater, and kitchen, as at first planned, were arranged quite differently from those that eventually occupied their sites.

On the north wall of the warming-house, immediately over the later doorway by which it was entered from the cloister, there may be seen the junction of a wall, now removed, which extended southwards (fig. 39) ; and a like junction may be observed in the kitchen between the two doorways on its north side. There also exists, running along the north walls of the later kitchen, frater, and warming-house, about 12 feet from the ground, a plain string-course ; and cut in this, at regular intervals, are the chamfered sills of a series of windows towards the cloister which, except in one instance, have never been utilized (see figs. 39, 41 and 45).

Since the eastern wall of the warming-house and the western wall of the kitchen, as well as the lower parts of their south walls, belong to the oldest work, it will be seen that the cross walls above mentioned¹ divided the range into (i) a warming-house on the east, 16½ feet long, (ii) a frater 70 feet long, and (iii) a kitchen on the west, 19 feet long. The sills above noted also show that the warming-house was to have had one window towards the north, the kitchen two, and the frater five. Of these last, the sill of one is visible in the later kitchen, those of two are in the north end of the frater, and a fourth is within the later warming-house. The fifth sill is obviously covered by the west wall of the later frater. The westernmost of the two windows now in the north end of the frater is built upon one of the old sills, but its fellow window has received a sill to match, cut into the old string-course.

This discovery of the original arrangement completely clears up the difficulty of the numerous doorways on the south side of the cloister, and it will now be seen that the first warming-house² was entered by the superseded entrance on the extreme east, and the frater and kitchen respectively by the two old doorways towards the west.

That the Cistercians occasionally built fraters standing east and west, after the Benedictine fashion, had already been noticed by the writer in the case of Sibton Abbey, in Suffolk ; the Kirkstall example, therefore, does not form a solitary English one. Mr. Harold Brakspear has, however, since suggested that at first it was general for the Cistercians to build their fraters east and west like other Orders, and that it was not until about 1150 that the change was made of placing them north and south. As, according to this theory, the first frater of Fountains Abbey ought to have stood east and west, permission was

1. See plan.

2. The warming-house fireplace was probably, as afterwards, against its west wall.



obtained from the Marquess of Ripon to test the question, with the result that¹ the foundation, 3 feet 3 inches thick, of its south side was found crossing the present frater at a distance of 25 feet 10 inches from the north wall, exactly at the point where it was sought for. It was also looked for in the kitchen with a like result, and traced to its junction with the west wall, where a fragment of it actually remains above ground. No doubt all the abbeys that were originally affiliated to Savigny also had east and west fraters, as at Furness.

About 11 feet west of the kitchen doorway, on the cloister side, may be seen the junction of a wall, $3\frac{1}{2}$ feet thick, now removed, which ran northwards to a similar junction in the church wall, and so completed the square of the cloister. This wall was part of the old setting out, as is shown by the different levels of the plinths on each side of it at the church end, and by a change of level in the string-course west of the kitchen.

This wall cut off, as it were, a westward extension of the cloister, forming a court or lane 25 feet wide. This court was originally open at the south end, but after the alteration of the first frater, etc. boldly moulded semicircular arches were thrown across it in continuation of the north and south walls of the kitchen (fig. 48). The arches were of three orders: the outermost square, the next chamfered, and the innermost moulded and carried by detached shafts with scalloped capitals. Above the arches was the wooden floor of a room, in continuation of that above the kitchen vault. The latter room, as noted above, was lighted by four small windows on the south; the part over the arches had four windows, two towards the north and two on the south, one of which is still perfect. These windows were taller and slightly wider than those over the kitchen (fig. 47). The room they lighted was entered from the lay-brothers' dormer on the west, and was probably a store place.

At some time in the thirteenth century the northernmost of the two arches under notice was closed by a thin partition wall and its opening reduced to a pointed doorway towards the west. In the fourteenth century another doorway was made in the eastern half of the blocking, and the earlier one built up (fig. 48). The southernmost arch was also closed at the same time as the other, but by a wall 26 inches thick, with an archway through it towards the east, and probably a window opening towards the west, but only the lowest courses of the wall now remain in place.

Late in the fifteenth century, when the whole of the space between the kitchen and the cellarer's building was converted into a malt house, the doorway from the cloister was walled up.

1. On 9th September, 1904.

THE CELLARER'S BUILDING.

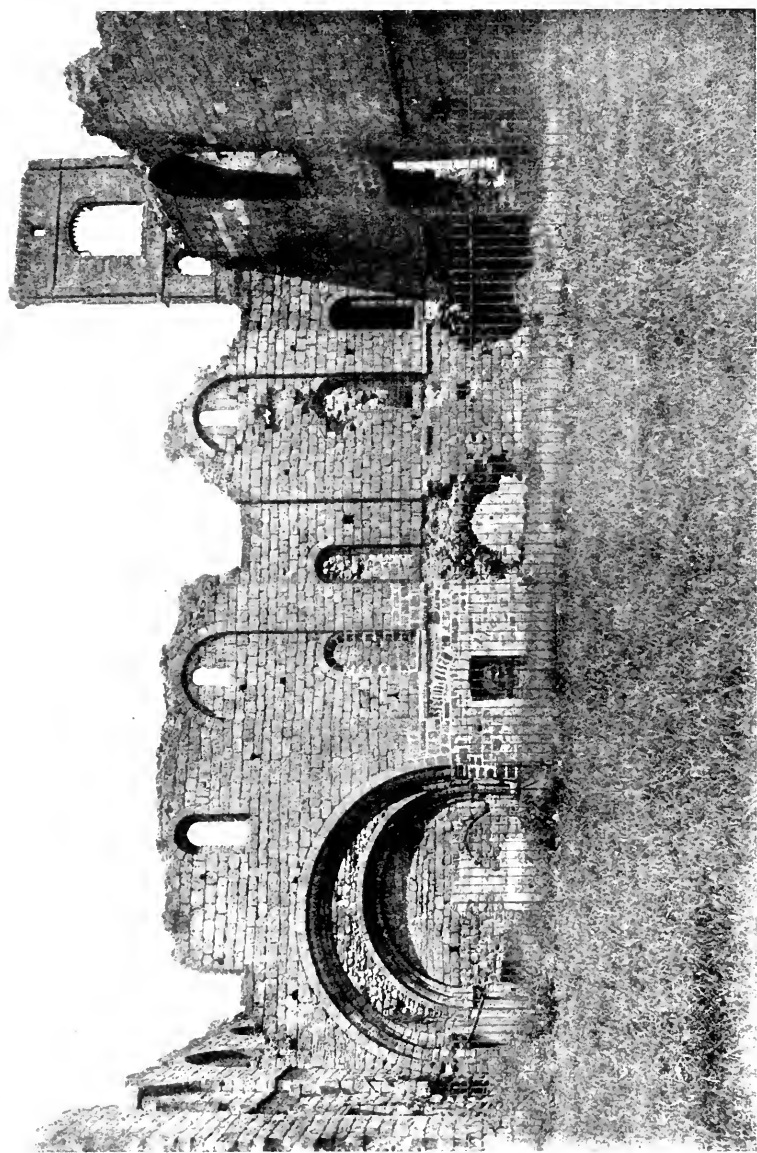
Extending from the church along the whole of the west side of the court or lane just described and for 30 feet beyond the southern range, are the remains of a building of considerable interest.

In the *Consuetudines* this building is called the *cellarium*¹, a name which, except as showing that it formed part of the cellarer's department, does not give any clue to its actual use. As a matter of fact this building was for the accommodation of the *conversi* or lay brothers: their frater and various offices forming the ground floor, while the upper story was their dormer.

As the division of the abbey buildings into two great groups, for the use of the monks (*monachi*) and for the lay brothers (*conversi*) respectively, is a feature peculiar to the Cistercians, it may make matters clearer to indicate the difference between the two classes. Both *monachi* and *conversi* were equally monks in that they had taken the three monastical vows of poverty, chastity, and obedience. The *monachi* spent their time in church and cloister, and never left the abbey precincts except in cases of necessity. They were not necessarily priests, although in course of time most of them became so, and then their life differed little from that of the regular canons. The *conversi*, or *fratres laici* as they were also called (in contradistinction to the *monachi*, who were *fratres clerici*), were practically monks who could not read. They were not necessarily of humble origin, but might be, and often were men of good family who desired to enter the monastic life, and being unlettered could only do so by becoming *conversi*, in which condition they always remained, since a *conversus* could never become a *monachus*. They had charge, under the cellarer, of all the secular and external affairs of the monastery, and many of them lived in the granges or farms, which they worked under the direction of obedientiaries chosen from among themselves. When resident in the abbey, as some of them always were, they kept certain of the hours in the church like the monks, and at the same times, but inasmuch as they could not read they substituted for the regular quire offices certain prayers and psalms which they learned by heart.

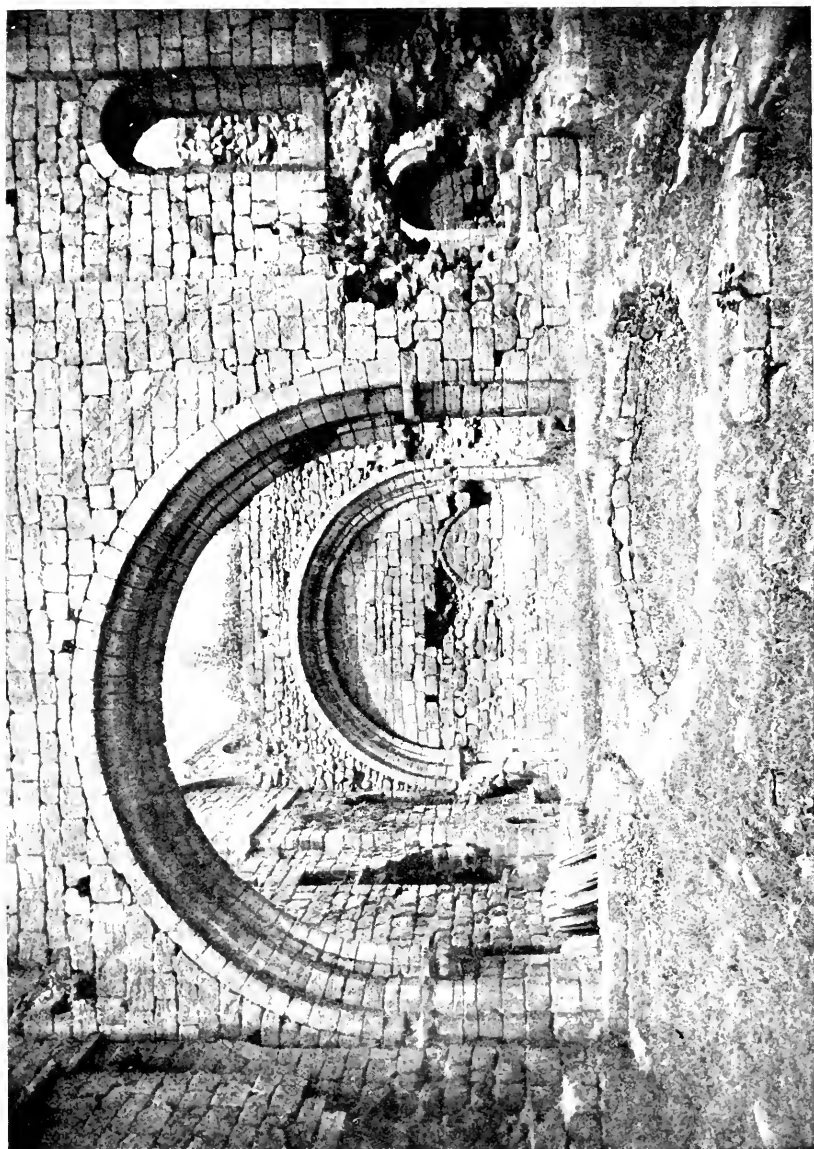
As has already been pointed out, the nave of the church was the quire of the lay-brothers, and the buildings for their accommodation

1. The identity of this building with the *cellarium* is clearly shown in the history of the sister abbey at Meaux. After describing the building of the monks' dormer and the rest of the eastern range, and of the frater and the buildings flanking it, the chronicler states that the fourth abbot, Alexander (1197-1210), "*refectorium conversorum ab abbate Thoma inceptum perfecit; et domum superiorem, scilicet dormitorium eorum, inchoavit.*" [*Chronica de Melsa* (R.S.) i. 326.] The *dormitorium conversorum* was finished by the fifth abbot, Hugh (1210-1220). [*Ibid.* i. 380.] Its position is fixed on the west side of the cloister by two entries: one recording that Abbot William (1372-1396) *leadend inter alia* part of the monks' cloister "ab ostio refectorii monachorum usque ad *dormitorium conversorum*;" the other that Abbot Burton (1396-1399) "*ipsam partem claustrum a dormitorio monachorum usque ad dormitorium conversorum juxta ecclesiam.*" (i.e. the north or church side of the cloister) "*fecit tabulis plumboque reparari.*" [*Ibid.* iii. 224, 241.] The *dormitorium conversorum* is mentioned in the *Annales de Crokesden* among the buildings erected by Abbot London (1242-1269). [Cott. MS. Faustina B. vi. f. 74.]



Photographed by C. H. Bohlen.





Photographed by C. H. B. Thompson.



which included a dorter, frater, infirmary, etc. were in immediate connexion therewith, just as the monks' buildings adjoined their part of the church.

The great size of the buildings for the lay brothers has often been commented upon. At Fountains the *cellarium* is as many as 300 feet long, but there is no record of the numbers of the *conversi* there. At Waverley at the end of the twelfth century there were 120 lay-brothers and 70 monks, and the *cellarium* was about 170 feet long and 26½ feet wide. At Louth Park, where the *cellarium* was 190 feet long, during the second quarter of the thirteenth century there were 150 lay brothers and 66 monks.¹ At Meaux, in 1349, the *conversi* were only 7 in number, all of whom died of the Great Pestilence, as well as 32 out of 42 monks then in the abbey. It was probably on account of the fearful mortality caused by this terrible scourge, as well as because the gradual spread of education and other causes had extinguished the class from which they had been formerly drawn, that after the middle of the fourteenth century the *conversi* in this country seem as a class to have died out, and to have been replaced by hired servants and labourers. Meaux is one of the few English abbeys where they are known to have been continued, but their number is not recorded, and in the time of Abbot William of Scarborough (1372-1396) they all struck work and were superseded by monks.² Their buildings were then put to other uses.³

At Kirkstall the first stone buildings are recorded to have included beside the church, "*utrumque dormitorium monachorum scilicet et conversorum, utrumque etiam refectorium, claustrum, et capitulum,*" etc.⁴ that is, all the buildings round the cloister, including the frater and dorter of the lay-brothers, which, as already shown, occupied the greater part of the *cellarium*.

The *cellarium* itself was 170 feet long and 28 feet wide internally, and of eleven bays. As usual, it was built as one great apartment vaulted from end to end, but this length was divided by cross walls into several sections. The vault had transverse and moulded diagonal ribs, and was supported on corbels against the walls and by a row of pillars down the middle, but has all fallen in, and only part of one pillar remains at the north end (fig. 49). It had obviously been

1. *Chronicon Abbatie de Parco Lude* (Lincolnshire Record Society, 1891), 15.

2. "Ejus tamen tempore, conversi omnes de monasterio defecerunt; pro quorum numero monachos supplevit, et annuum pensum pro victu conventus augmentavit. Infirmitaria conversorum et sæcularium ab incolis et invalidis destituit. Coquinam infirmitarii conversorum diruit, ac aliam coquinam antiqui hospitii in cameram super polanyhat reformavit, et pectinium deinde usque ad magnas portas construxit, quod de capella extra portas fecerat amoveri." *Chronica de Melsa*, iii. 229.

3. At Hayles the *cellarium* had been converted into the abbot's lodging for some time before the Suppression, and a similar thing seems to have happened at Ford, where the sumptuous hall and other apartments of the abbot's house built by Abbot Chard in 1525 still remain in a most perfect state, extending westwards from the former site of the *cellarium*. See a paper by Mr. Gordon M. Hills, published by the British Archaeological Association in *Collectanea Archaeologica*, ii. 145-159.

4. Dugdale, *Monasticon Anglicanum* (ed. Caley, Ellis, & Bandinel), v. 531.

inserted subsequently to the first building of the *cellarium*. The whole of the west wall has also gone, except in the two southernmost bays, but the external features of the first five bays can fortunately be recovered from a view of the abbey painted by J. B. Bowllat, sen., in 1735¹ (fig. 50). Internally the first or northernmost bay was shut off by a wall² from those beyond, and served as the outer parlour, where the monks could talk with their friends and transact business with outsiders. It was entered from without by a broad and low doorway in the eastern half of the north wall. Above this to the east is a square-headed window, and there was a like window, but lower down, in the western half with an opening of some kind over it.³ Bowllat's view shows another but round-headed window in the west wall, with an inserted door below it towards the north. The east wall has a doorway from the cloister, with a small loop south of it (fig. 51). The next four bays probably formed a large cellar. This was entered from the west by a large doorway in the third bay and had windows in the other bays. Under those in the fourth and fifth bays Bowllat shows a small doorway. In the east wall of the fourth bay is an original doorway from the cloister. The sixth bay formed the entrance to the cloister. Its outer doorway has gone but the inner remains, though blocked. The remaining bays formed the frater of the lay brothers. It may have had a doorway from without in the seventh bay, but the west wall of this and the next two bays has gone, and all that is left is part of a window in the tenth bay. On the east side there was originally a window in the seventh bay and there is another in the eighth bay with a serving hatch under it (fig. 52). The ninth bay has a wide doorway⁴ from outside, with a round-headed light over, and the last two bays have windows.⁵ The window in the tenth bay was, however, blocked very early by the building against it of a pier of the wide arch on the outside. On the west the last two bays are over-lapped by the lay brothers' reredorter. The south end has entirely gone, but had two windows towards the frater.

The upper story had no windows in the north end, but there are two higher up in the gable, which have been walled up, probably on account of a change in the pitch of the roof they opened into. The north end of the east wall has been much patched and in part rebuilt and does not now show any traces of windows in the first three bays which no doubt had them originally. The fourth bay has a wide round-

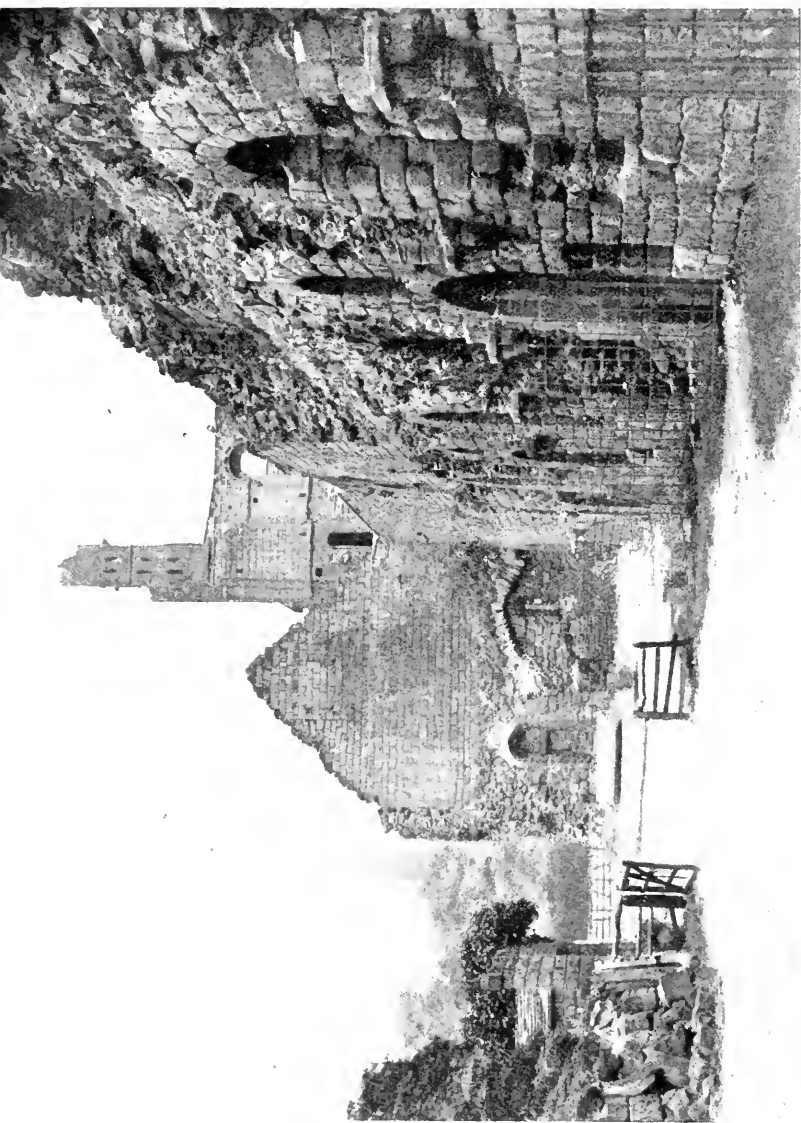
1. This view depicts the abbey as seen from the west, and with another showing it as seen from the east, is now preserved in the Abbey Museum, to which both paintings were given by Mr. L. Wedderburn in 1894.

2. In the plan published by Burton in his *Monasticon Eboracense* in 1758, this first bay is shown cut off by a wall and covered by its vault. He also shows the vault as remaining in the southernmost bay.

3. This has been tampered with.

4. To the south of this is a large wall locker (fig. 52).

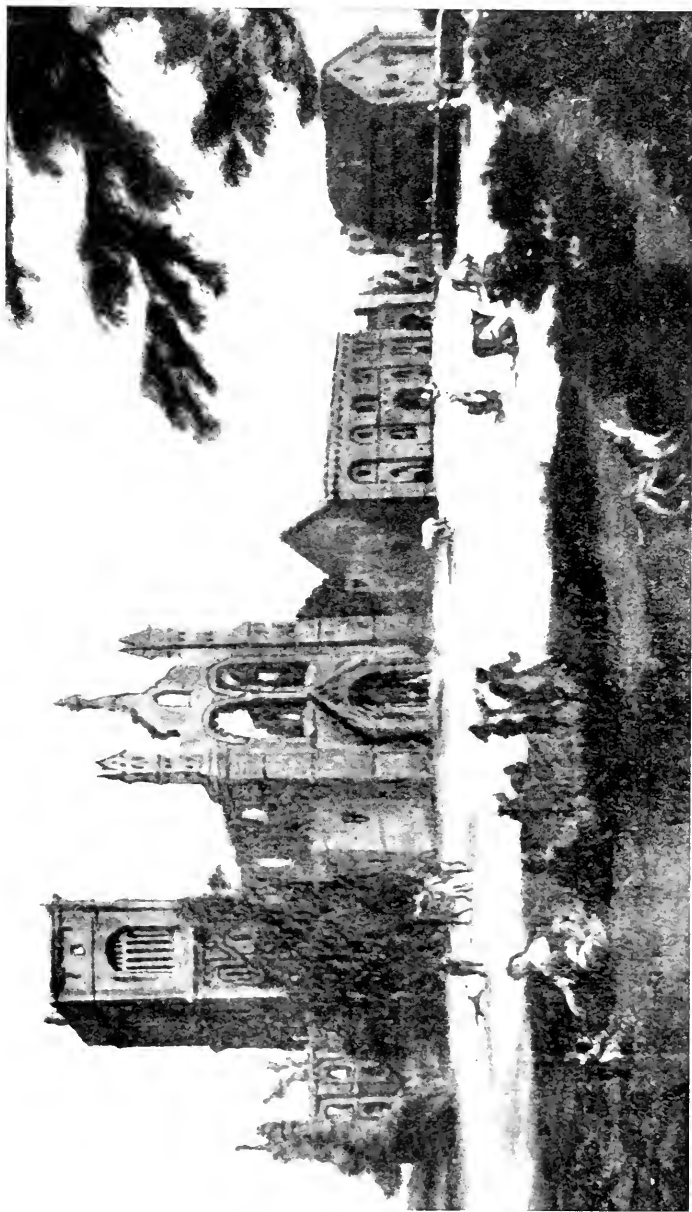
5. The last window has been tampered with.



Photographed by Godfrey Bingley.

Fig. 49. Remains of the cellarer's building, looking north (before the late repairs).

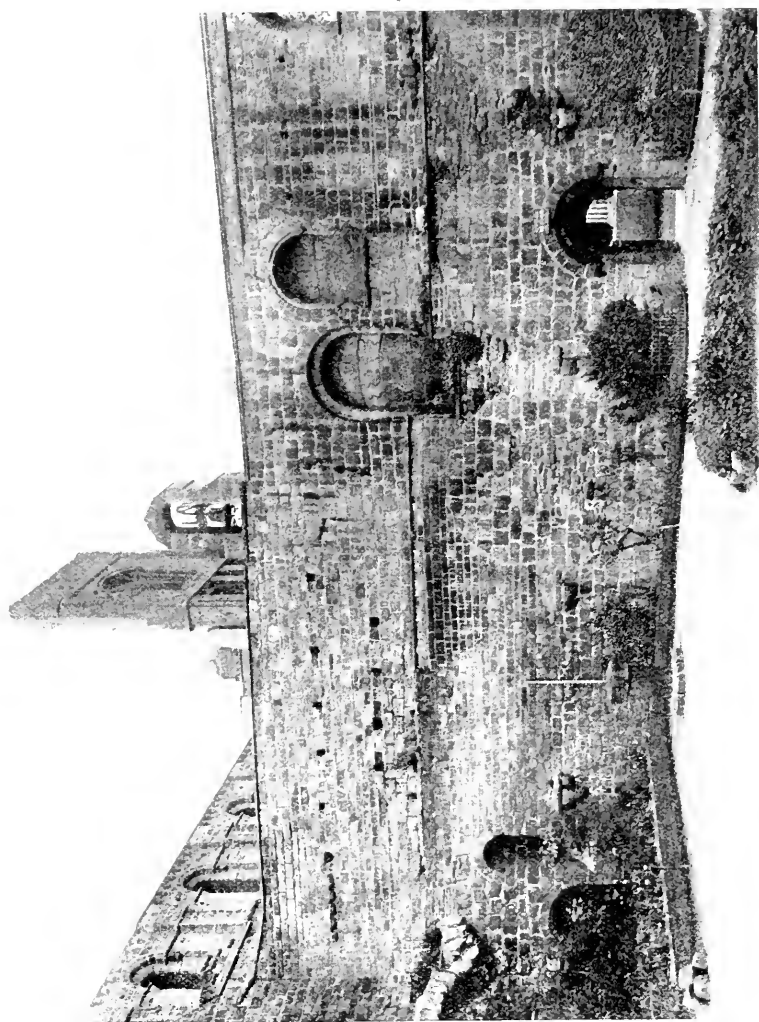




Photographed by Geoffrey Bingley.

Fig. 50. Kirkstall Abbey from the west, before the fall of the steeple and the destruction of the west wall of the *cellarium*.
From a painting by J. B. Bowdler, sculp., in 1735.





Photographed by C. R. H. Fisk.

Fig. 51. East side of cellarer's building, showing clorter door etc.





Photographed by Godfrey Bagley

Fig. 52. Part of east face of the cellarer's building, with doorway to the frater of the lay brothers.



headed rear-arch of a doorway, with a sill somewhat lower than the floor line and showing at the back the curiously joggled head of a segmental arch (fig. 51). Immediately south of this is a large round-headed locker grooved for shelves and rebated for a door. It was perhaps originally the niche for a cresset with many lights. Each of the remaining bays contained a window, except the ninth, where it has been cut down to form a doorway into the room over the kitchen (fig. 52). The round-headed openings of most of these windows are still perfect: on the inner side all the facing had long disappeared, but has recently been replaced by new stonework. The south wall has fallen, but according to the Bucks' engraving of 1773 had two windows in the lower story and two others above, probably like those in the north gable. On the west side the last two bays being overlapped by the rere-dorter had no windows, but there was a large doorway in the end bay into the rere-dorter itself. The wall of the rest of the range north of the rere-dorter has gone, but according to Bowllat's painting it had a window in each bay.

The east side of the *cellarium*, next the lane, has on the ground floor, at the church end in the first bay, a doorway and a narrow loop, now blocked, that opened into the outer parlour. Against the second and third bays was originally an ascending staircase of stone to the doorway in the fourth bay of the upper floor, which is much lower down than the windows, so as to avoid too long a stair up to it. The landing before this doorway must have been carried on piers and arches, now gone, as there is an original doorway below it that communicated with the great cellar, probably for the passage of beer and stores to the frater and kitchen. The staircase was that by which the lay-brothers had access to their dorter, and as will be seen from the plan, there was a wide doorway opposite the foot of it by which they went directly into the church for their services (fig. 53). The fifth and seventh bays each contain a window, and between them, in the sixth bay, is a wide doorway of two orders with a lozenge-shaped light over, now blocked, which formed the eastern opening of the cloister entry through the *cellarium* (fig. 54). The upper story has the pilaster buttresses between the bays carried up and then turned over as round-headed arches just below the corbel table. Along the northern part of the building this has been obliterated by modern refacing, but in each of the fifth, sixth, and seventh bays there is a round-headed window at the dorter level. The external features of the four southernmost bays all correspond with those within, and have the tall wall-arches over the windows like the bays to the northward and elsewhere in the earliest work. The north end of the *cellarium* has pilaster buttresses at the angles and another

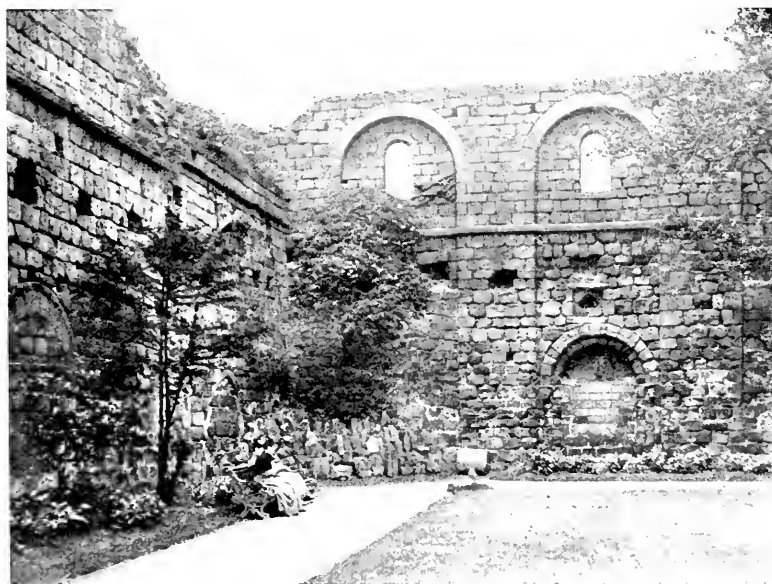
between, and all three were carried up and arched over like those on the east side to form panels, but sufficiently high to contain the two windows that opened into the original roof. Bowllat's painting shows that the pilaster buttresses along the west wall were similarly treated and had over them a bold corbel table. He also shows below the string-course that divided the two stories, a row of corbels which evidently carried a pentise in front as at Fountains and elsewhere. There is nothing to show whether the *cellarium* had an external staircase on the west side like that at Fountains, but as there are no marks of the pentise against the rere-dorter wall, there probably was such a staircase, perhaps only of wood, and in later days as will be seen below it would be wanted to gain the upper floor.

Before leaving the *cellarium* mention must be made of some important changes on its eastern side. It has already been pointed out that the cellarer's building was cut off from the cloister by a court or lane. A similar feature occurred at Cîteaux, Clairvaux, and other abbeys abroad, and at Beaulieu and Byland, and perhaps Whalley, in England, but for what purpose is uncertain. It is equally uncertain what dictated its adoption. It did not exist at Fountains, though it does at the daughter house of Kirkstall, and is not found at Jervaulx although the mother house of Byland has it. It has been suggested that it was to shut out from the cloister the sound of noisy trades carried on by the lay-brothers in the *cellarium*, but this can not be, since the lay brothers did not use any part of that building as a workshop. Whatever was its original purpose it was soon done away with or lost sight of, and at Kirkstall the arches spanning its open south end were walled up in the thirteenth century. Late in the fifteenth century, by taking down the dividing wall, all the part of the lane west of the cloister was done away with, and its area added to the cloister itself. The recesses between the *cellarium* buttresses were then walled up, and the windows in them blocked, as was the doorway in the blocking wall of the great arch on the south. The continuous row of holes for the roof timbers that may be followed all round the cloister, across the blocking of the old lane arch, and along the *cellarium* wall, shows that the cloister itself was entirely reconstructed to suit its enlarged area. One other point may be noticed, that over the western of the two large doorways into the church there are the marks of the roof of a pentise (fig. 53). This pentise evidently extended southwards and upwards as far as the lay-brothers' dorter door, and so allowed them to pass under cover, like the monks, to the night offices in the church. By the time when the changes described above were made the lay-brothers had probably long been replaced by hired servants and their quarters in the *cellarium* put to other uses. Their



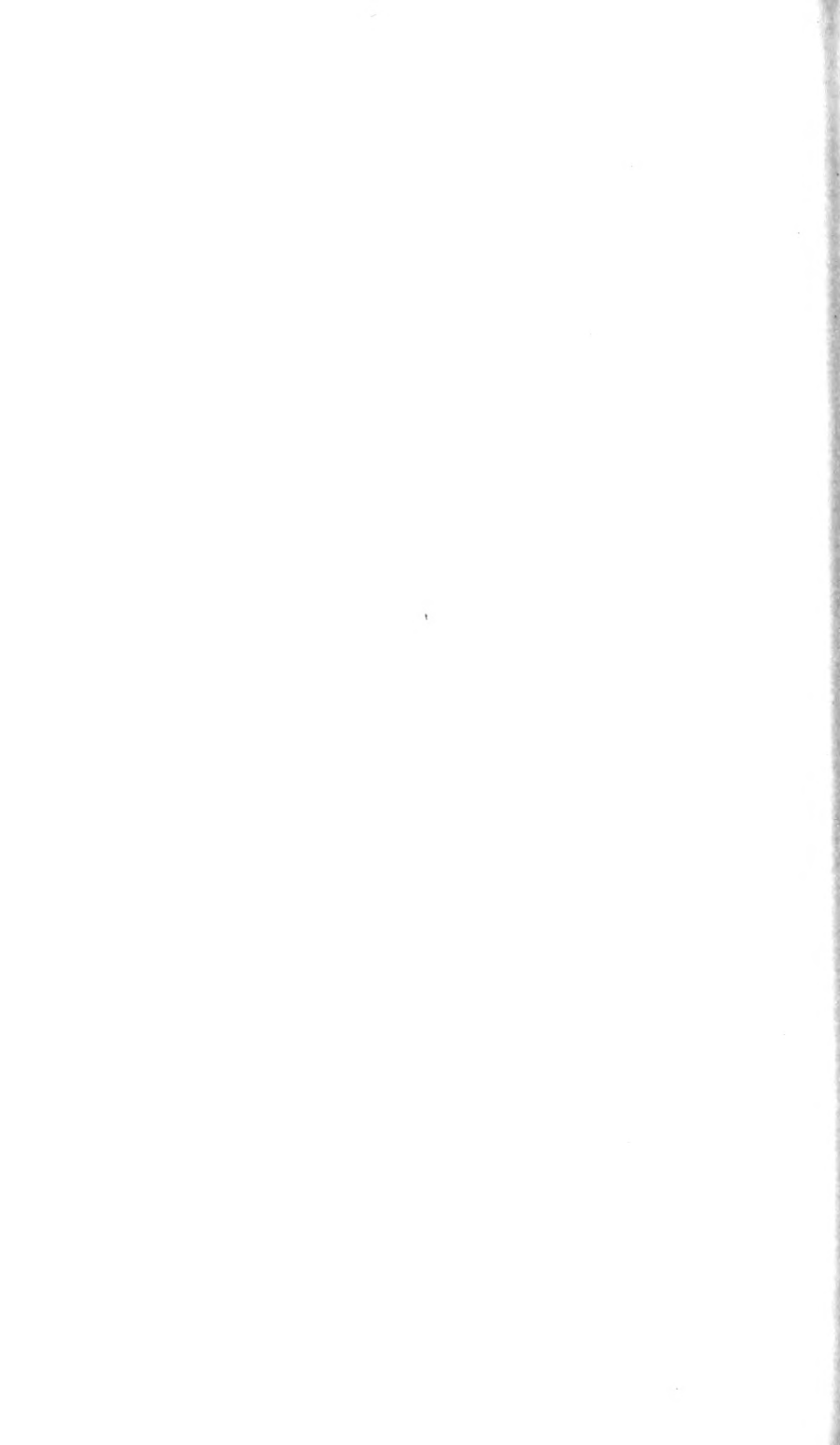
Photographed by C. H. Bothamley.

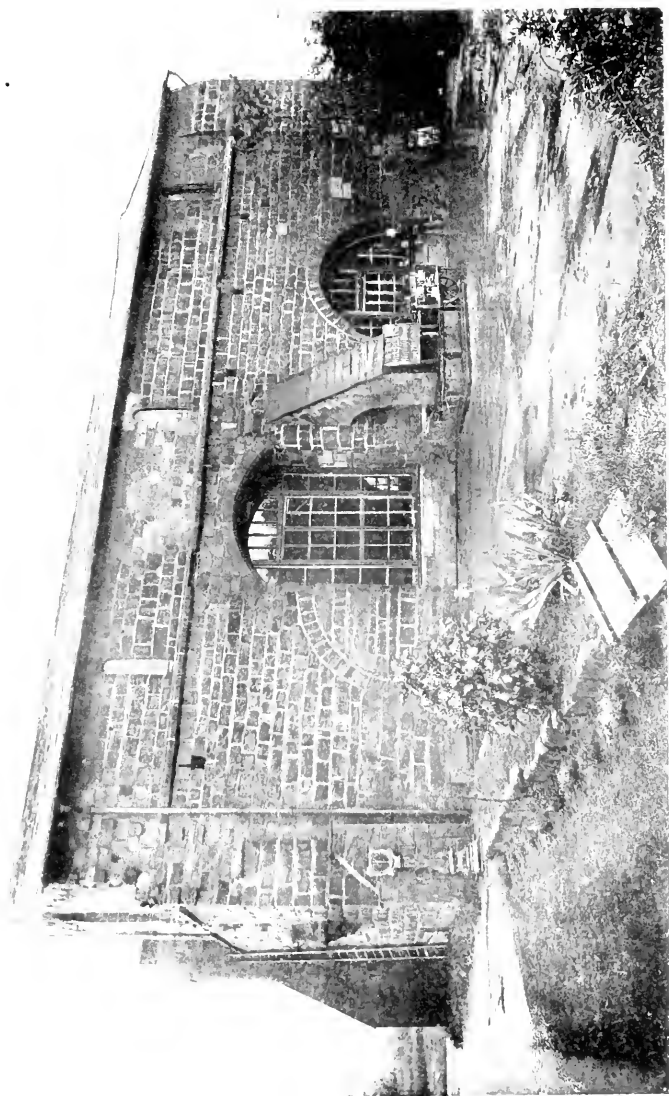
Fig. 53. Western doorway from the cloister into the church.



Photographed by C. H. Bothamley.

Fig. 54. Part of east face of east side of the cellarer's building (before the late repairs).





Photographed by J. Howe.

staircase, and with it the pentise that covered it, was therefore cleared away when the cloister was enlarged and the church doorway used, as it had ever been before the lay-brothers had ceased to be, as the entrance for the Sunday procession after completing the circuit of the cloister offices.

After the extension of the cloister the room west of the kitchen seems to have been turned into a malthouse. A large steeping vat, about $11\frac{1}{2}$ feet in diameter, was built outside it on the south (fig. 48), and as there was no longer any need to use the room as a passage to the former frater of the lay brothers its pavement, if flagged, as it probably was, would have made an excellent germinating floor, or the southern part of the lay brothers' frater may have been so used. The oven at the north-east corner was no doubt made for drying the malt at the same time as the steeping tank. Perhaps the old kitchen served at need as the brewery.

THE RERE-DORTER OF THE LAY-BROTHERS.

Abutting on the west side of the two southernmost bays of the *cellarium*, though not at right angles to it, is a two storied-building, about 60 feet long and 22 feet wide internally, which contained the rere-dorter of the lay-brothers (fig. 55). Internally it has been completely gutted, but down the middle of its length ran the drain, which was enclosed between two thin walls or wooden partitions carried up to the first floor. This was entered by a wide doorway from the lay-brothers' dorter, and had a double row of privies, back to back, over the drain. This upper floor was lighted by three narrow round-headed windows on each side, and by a group of three at the west end. The present roof is modern. The ground story has on each side two wide round-headed arches, and in the west wall two windows. In the east wall is a blind arch on the outside of the last bay of the *cellarium*.

Externally the building has clasping pilaster buttresses at the western angles, and another buttress in the middle of each side, stopped off below a bold string-course under the upper windows. Below this string-course Bowllat's painting shows a row of corbels for a pentise, which is also suggested by the section of the string-course itself, but no remains of these corbels can now be traced. The southern arches have lately been unblocked and glazed, as has one of those on the north and a large modern opening which cuts across its fellow. The western gable seems to have been planned to have its buttresses carried up to form arched panels enclosing the windows, like the north end of the *cellarium*. Under the middle panel may be seen the arch spanning the drain.

Somewhere in the immediate vicinity of the *cellarium* was the infirmary of the lay brothers, but it has been completely swept away, and no traces of it have been met with. It may have been a wooden structure. At Fountains, Jervaulx, Waverley, and Furness it had a large pillared hall, corresponding to the infirmary hall of the monks.

THE GUEST HOUSE.

It will be seen from the general plan of the site that the galilee porch on the north of the church and the wall running north therefrom do not extend towards the inner gatehouse, but in a direction considerably to the east of it. Here there probably stood one of the guest houses, but no remains of it are now visible, though foundations are said to be underground in the shrubbery south-east of the gatehouse.

Some scanty remains of another guest house have long been standing above ground about 250 feet away to the north-west of the church, but through ignorance of their true character have been regarded as part of the mill, and so marked on the Ordnance Survey $25\frac{1}{10}$ Map. Since the acquisition of the abbey by the City of Leeds, the building of which these fragments formed part has been excavated. Though little more than the plan exists, it shows clearly all the arrangements of an interesting thirteenth century guest house, with later additions.

The building, which lies roughly north-east and south-west, seems to have consisted at first of a hall, with a great chamber and solar over at the northern end, and the pantry and buttery and kitchen block at the southern end. It is possible, from the thinness of the walls, that the whole building was more or less of half-timbered construction.

The hall was about 60 feet long and 43 feet wide, and divided into four bays, as well as into a nave and two narrow aisles, by wooden pillars that helped to support the open roof. The place of the fire in the middle of the hall is still marked by its hearth of thin stone slabs set on edge, with a stone border or fender. The hearth is about $6\frac{1}{2}$ feet square. The hall seems to have been entered by a doorway at the north end of the east wall, as there are no signs of an entrance at the south end. Opposite the doorway is a stone staircase to the solar, and under the stairs a doorway to a urinal, with two openings into the drain. Just to the east of the stairs was a doorway into the great chamber.¹ This stood athwart the north end of the hall and measured $45\frac{1}{2}$ feet by 22 feet; it had a separate entrance of some pretensions in the east wall. In the middle of the north wall is a projection for a chimney breast outside. In the south-west corner is a small square-headed doorway into a garderobe. This contained three privies

1. The west end of this and the garderobes outside it are the only parts of the building that are standing to any height.

arranged in a row against the east side and divided from each other by wooden partitions carried by stone arches over the drain. The end walls are carried over the latter by similar square-edged arches. The solar extended over the whole of the great chamber and was reached by a stone stair 4 feet wide. At the head of the stair was a doorway of which the west jamb, with the hollow for a detached shaft, is left. From the north-west corner of the solar a doorway opened into a garderobe in continuation northwards of that appended to the great chamber, but only the two shafts belonging to it now remain. The solar apparently had a fireplace in the north wall.

The block at the south end of the hall stood athwart it like the great chamber and solar, but extended a little further west to include the drain in that end of it. It measured 54 feet by 20 feet, but was divided, probably by a wooden partition, into a buttery and pantry to the west, and a kitchen to the east. The buttery, which included the pantry, had a small doorway into it from the hall as well as an outer doorway on the south. The doorway from the hall was perhaps halved to form a buttery hatch at need. The kitchen had a wide doorway from the hall and a large fireplace in its south wall. Of its eastern half little else than the footings remains; it is therefore impossible to localise its outer doorway.

Some time towards the close of the thirteenth century a number of important changes were made in and about the guest house.

Apparently with a view of obtaining increased accommodation the northernmost bay of the hall was walled off from the rest to form a separate room, leaving only space to the west of it for a narrow passage to the great chamber; from the passage there was a doorway into the new room. The east wall of the hall was taken down, and in place of it there now remain, one on each side of its line, two parallel walls about $3\frac{1}{2}$ feet apart, with two short return walls 4 feet 3 inches apart at the south end. The latter appear to be the foundations of a porch which opened, not into the hall, but on to a staircase ascending northwards up to a gallery giving access to an upper chamber or series of chambers over the south aisle of the hall and to another upper room over the new chamber at the north end of the hall.¹

It was also found necessary to make corresponding changes at the service end. These included the building of a new kitchen further south with an intervening scullery and serving place, and a cellar or store place on the east, and the conversion of the old kitchen into a buttery; the former buttery and pantry henceforth served as a pantry only. The old block containing these was also subdivided by cross

1. At the time of these changes the openings into the drain from the urinal behind the staircase in the hall were walled up, perhaps because the walls enclosing the drain were carried up to give additional garderobe accommodation for the new upper rooms.

walls to form a passage through the middle to the new kitchen. Owing however to the position of the old kitchen fireplace, the new doorway at the south end of the passage could not be inserted opposite the old one at the hall end, so the passage walls are placed askew. In the new pantry so large a fireplace as was meet for a kitchen was not wanted, it was accordingly reduced in size by partly walling it up on the west.

The new kitchen was separated from the old block by a passage 15 feet long and 11 feet wide. From this there opened, beside the doorway into the kitchen, another on the east into what must have been a scullery. This has a stone trough in the north end with a drain from it to a section of the floor in the south-west corner, which is flagged and bordered with flags set on edge. From this a drain runs westward to meet the main drain which traverses the west side of the guest house. The new kitchen is about 25 feet square and has, in the middle, part of the hearth of a large fireplace, made of thin slabbing set on edge. In the north-east corner are the supports for a large copper or set-pot. Just to the south of this was a doorway into a long room about thirteen feet wide extending southwards from the hall for nearly 35 feet and overlapping the scullery¹ and most of the kitchen. The steeply-chamfered sill of a doorway remains at its south end, but of the rest so little else than the footings remains that nothing can be said as to its arrangements. It probably served as a cellar or store place.

Of later changes in the guest house there are very few traces, the only noteworthy one being the insertion of a second fireplace in the south-west corner of the kitchen, perhaps in the fifteenth century. A large yard about 40 feet square was also formed about the same time to the west of the kitchen. Its west side was closed by a large building, 48 feet long and 20 feet wide, which was evidently a stable. Little else than its foundations remains, but it retains a good deal of its flagged floor, down the middle of which ran an open stone drain 9 inches wide and 6 inches deep, which returns eastwards before reaching the north end. There is a small doorway in the south-west corner and the base of a chimney breast outside the east wall. This evidently belonged to an upper chamber, which was reached by a long and narrow stone staircase starting at the south-west corner of the kitchen and closing in the south side of the kitchen yard. Through the west end of it was a passage into the court. The court was nearly closed in on the north by the south wall of the pantry, except for about 11 feet, where there appears the foundation of a thin wall with the sill of a

1 Unless the area west of this scullery was partly open, with a pentise only to cover the passage to the kitchen, it is difficult to see how the scullery could have got any light.

doorway. As this opened northward it suggests the probability of its having belonged to a stair against the pantry wall leading up to a room or rooms over the buttery and pantry.

It is most unfortunate that owing to the loss of practically everything above the floor level it is impossible to say anything further about the guest hall and its arrangements.

Mention has yet to be made of one other building in this part of the precinct, a large bakehouse that stood to the south-west of the guest house.

The foundations of this were laid bare at the same time as the guest house, and showed it to have been about 70 feet long and 45 feet wide. Towards its western side were: a large kneading trough against the wall; the bases of two fair-sized ovens; and south of them, in the floor, an under mill stone, 5 feet in diameter, near which were found the broken pieces of the upper stone. It would be interesting to know how the mill of which these formed part was worked.

Outside the building alongside its west wall was a drain, the covering stones of which were formed of moulded stones from some late fourteenth or early fifteenth century building. North of the bakehouse and between it and the guest house there was, according to the late Mr. J. T. Irvine, a pitched road towards the main buildings of the abbey.

Nothing further can now be said about the bakehouse, owing to the remains of it having been needlessly destroyed during the laying out of the abbey grounds by the civic authorities.

Immediately to the south of the kitchen court is an interesting sluice box of stone, probably of the thirteenth century, connected with the drainage system. Into it there opens the drain that traverses the west side of the guest house, and from it there started two other drains, one onwards to the river in line with that from the north, the other south-eastwards to the lay-brothers' rere-dorter and on through the main buildings to the further side of the infirmary. Beyond this it has not been traced, and the first part from the sluice-box also cannot be laid down on plan, though a note of Mr. Irvine's says it "changes its course very curiously." Were it properly followed it might throw light on the whereabouts of some of the missing buildings.

APPENDIX.

REPORT ON THE PRESERVATION OF THE RUINS OF KIRKSTALL
ABBNEY.

The Cistercian Abbey of Kirkstall was founded by Henry de Lacy in 1147. and first established at Barnoldswick, but removed to its present site in 1152.

The earliest buildings were of wood, but during the life of the first abbot, who died in 1182, the whole of the church and the claustral buildings were built of stone; and their ruins, with those of some later buildings on the east, still remain in so perfect a state that they may be considered second in importance only to Fountains amongst the ruined abbeys of the north of England.

The church is about 220 feet long, and of the usual early Cistercian type. It consists of an aisleless presbytery of two bays; north and south transepts, each with three chapels on the east; a central tower; and a nave and aisles of eight bays. In the fifteenth century the roofs were lowered and the gables re-modelled, and a large east window was inserted, with two others in the nave to light the retro-choir. At the beginning of the sixteenth century a story was added to the tower. New east windows were also put in the transept chapels, and some of the larger Norman windows divided by tracery. With these exceptions, the whole of the church is of late Norman work.

At the suppression of the abbey, in 1540, the church was stripped of its wooden roofs and furniture, but nothing else was destroyed. The building remained quite whole until January, 1779, when, through the failure of the north-west pier, the north and west sides of the tower, with part of the east side, fell to the ground, crushing two bays of the north aisle in their fall.

The walls of the presbytery are in fairly good order internally, but their upper parts are much decayed on the surface through long-continued percolation of water, and should be carefully pointed. The gable is gradually falling outwards, notwithstanding two long iron ties put in, I am told, some sixty years ago, and it ought to be shored up and underpinned, and the cracks in the side walls filled up. The sill of the east window has been cut down, and is now replaced by a thinner but higher wall, which may well be lowered to the original level of the sill. The vault is entire, but is covered with a thick layer of soil and grass, in which ivy and small trees have taken root. The whole of this soil and vegetation ought to be carefully removed, the groining well grouted where necessary, and the whole protected by a simple roof. The gable is perfect, but requires protection at the top to keep out the wet, and the curious pinnacles should be looked to and pointed

where necessary. The south wall is in fairly good order, retaining portions of its parapet. The north wall has lost its parapet, and the top courses should be re-set. The new roof can be kept nearly flat, so as not to interfere with the picturesque appearance of the ruin.

The south transept is in good condition both within and without, and needs little doing to it beyond re-setting the tops of the walls and covering them and the gable to keep out the wet. The corner pinnacles should be looked to, and pointed where necessary. Against the west wall inside is a roughly-made ascent to a door in the south wall, from which it is continued upwards to the old level of the dorter. This ascent represents an original flight of steps, but these were arranged in a very different manner, and had a landing midway, with an entrance on the right to a small vaulted treasury outside the transept. The transept-chapels retain their vaults complete; but the soil and vegetation covering them ought to be removed, and the groining protected by a roof. The south-east angle is badly dislocated by the roots of a tree, and will have to be partly rebuilt. The side walls of the chapels are much decayed on the surface from percolation of moisture, and should be carefully pointed.

The north transept is encumbered with the ruins of the tower, on which an unsightly buttress has been built to give support to the west side. This is much covered with ivy, but appears in fair order, though it has a wide crack on the outside where it parted from the gable when the tower fell. When the ivy is cleared off and the rubbish removed within and without, it may be found that this wall needs screwing up and underpinning. The tops of all the walls are in bad order, and, especially in the case of the gable, will have to be partly re-set and protected from wet. The north doorway is blocked up. The chapels on the east side of this transept are more ruined than those on the south. The walls are much decayed, and need pointing. The windows are partly built up, and might have the filling lowered to the level of the sills. The vaults have perished considerably, and with the walls are covered with a growth of young trees. All these should be taken away, the tops of the walls re-set, the remains of the vaults grouted, and the whole roofed over for protection.

The original tower was supported by four lofty pointed arches, but until it was heightened in the sixteenth century only rose one story above the roofs. The north-west pier and the north and west arches were utterly destroyed by the fall of the two sides of the tower in 1779. The south side is still standing complete to its full height, but has nothing to support it on the north, and the slightest failure or an unusually violent gale might bring the whole to the ground. The adjoining half of the east side also remains, but part of the arch of a

large window hangs over in a very threatening manner, and ought to be supported by a stone pier. There are also several large stones which might fall at any time and ruin the vault of the presbytery.

There seems to be only one way to deal with what is left of the tower, and this is to re-build the fallen pier and arches, with so much of the wall above as will form an efficient buttress to the south and east sides. The old stones might be used as far as they will go, and the deficiency made up with new, only roughly hewn into form, so as to mark it as a modern repair. The two fallen bays of the aisle should be treated in the same way. It may be found necessary also to re-build the upper part of the west wall of the south transept next the tower. The masonry of the upper part of the tower will require attention in places ; all the ivy should be removed, and the tops of the walls made good.

The arcades of the nave, except so far as they have suffered from percolation of wet from above, are in fair order, but the clearstory has suffered seriously from ivy and vegetation, from which it should be freed. The remains of the parapets and corbel tables and the upper courses, and many of the window heads, are so dislocated that they will need to be re-set, and the top made water-tight. The north side in particular demands attention, as the tops of the pilasters are forced out dangerously. The west gable needs some of the stones to be re-set. The pinnacles, too, want attention and pointing. The gable of the west porch should also be protected from wet from above.

The aisle walls internally are much decayed on the surface from percolation of water, and might be pointed. The vaults are nearly perfect, but have partly fallen at their eastern ends, and the destruction is going on. The vaults are now covered with a layer of soil and coarse grass, full of ivy roots and small bushes. All this should be removed, and the groining grouted where necessary and protected by a light roof. The remaining parts of the parapets and corbel tables and the tops of the walls must also be protected. There is a north door, which is blocked ; its external gable needs pointing. One of the archstones of the south door has dropped, and should be forced back into place.

The tops of the walls and the window-sills everywhere want carefully pointing to keep out the wet. There are no pavements or gravestones throughout the church, except a fragment of tiling at the west end of the nave, and a collection of tiles which have been re-laid in the southernmost chapel on the south side. The rest of the floor inside would best be gravelled. There are stone foundations here and there which tell of the old arrangements of the church, and these, though fragmentary, should be carefully preserved as they are. The plinths all round the church are more or less buried. It would be well if the

accumulated soil and stones were removed, and a wide gravelled path laid out which can be kept clear of weeds.

The area of the cloister, which was on the south side of the nave, has a grass-plat in the centre, with gravelled walks round, and flower beds, or rather shrubberies, against the walls. The church wall, which forms its north side, is covered with ivy, the whole of which ought to be killed, and when dead removed. On the east and south sides are ranges of buildings. On the west side of the cloister was an open lane about 23 feet wide, but the division wall is now destroyed, and the space added to the cloister area. The shrubberies should be done away with, and the gravelled paths carried right up to the walls. The south end of the lane was spanned by a wide arch, which in later times was walled up and a small doorway inserted. This wall is considerably out of the upright, and ought to be screwed up and underpinned. The small doorway, which is at present blocked, may then be opened.

The range of buildings on the east side of the cloister, extending from the transept southwards, contains on the ground floor a number of apartments of considerable interest, most of them fortunately in fair preservation. Adjoining the transept are two small chambers. The easternmost was the vestry, and has a door from the transept. Its vault has partly fallen, but what is left can easily be preserved, and the floor should be cleared of an accumulation of rubbish and stones. The east window should also be opened out and glazed. West of the vestry is a low chamber entered from the cloister, probably a book closet. Its vault is complete, and had over it the treasury and the stairs already mentioned as leading from the church to the dorter. The treasury should be cleared of rubbish, and in order to preserve it and the vestry from the weather, a low roof should be placed over them across the width of the transept, which could easily be done if the present rough stairs were altered to something more like those which were originally there.

Next to these, southwards, is the chapter-house, which is in good order, with its vault complete. Some of the jamb shafts of the doorways have been "restored" in cast-iron, for which stone may well be substituted. The small windows on the east are modern, as are the walls in which they are set. Larger ones of a simple character might with advantage be inserted in place of them, and these and the side windows might be glazed to keep out the weather.

Next the chapter-house is a vaulted passage to the cemetery, which was on the east of the church. Its east door, which is blocked, is quite perfect, and should be opened out.

Adjoining this was a broad flight of steps forming the original day stairs to the dorter, but these are now destroyed. Under them

on the east was a small room with a south door, now blocked, and a window to the east. Both these should be opened again, and the window glazed.

Next to the dormer stairs a door in the corner of the cloister opens into a vaulted passage. This has on the left the blocked door into the space under the stairs ; on the right another door still open ; and on the east a door from which a covered alley or gallery led to the infirmary hall on the south-east. This passage should be opened out, the alley excavated to its original level, and a gravel path laid down from the cloister to the infirmary hall. This would show clearly the connection between the two.

South of the passage is a room, originally five bays long, with a central row of pillars. The vault fell in 1825, and the floor is still covered with its ruin. The pillars were each formed of a single stone, one of which is still standing ; the other three lie as they fell, and might properly be set up again on their bases. Owing to the destruction of a good deal of the east wall, it is hardly possible to set up the arches of the vault, the stones of which probably lie in order as they fell. The transverse arches of the northernmost bay remain, and are now underbuilt by clumsy modern walls. There is no reason why the floor of this room should not be cleared. In doing so, however, care must be taken not to remove the remains of any ancient partition walls, of which there was certainly one, and there may have been more.

South of this ruined apartment is the sub-structure of the monks' *necessarium*, consisting of a vaulted passage, with doors at each end of its south wall opening into a vaulted space over the drain. This passage and the drain should be cleared of rubbish, and their vaults cleared of grass and small trees, and cemented over.

South of the drain is another passage.

The whole of the upper floor of this range formed the monks' dormer, but it is almost wholly ruined. The remains of the walls should be cleared of vegetation, and carefully pointed where necessary, and the tops made good.

The vaults of the chapter-house and three chambers to the south of it form an asphalted floor, which requires a little attention, especially as regards the drainage. The only access to this is by the door from the south transept, which should be closed by an iron gate. As the vault of the chapter-house is not strong enough to bear with impunity the dancing which large parties occasionally indulge in there, this gate should be kept locked, and only opened for the convenience of persons desirous of studying the buildings.

The exterior of the chapter-house has been stripped of much of its ashlar, and requires careful pointing in places. The lower parts of its walls, and of those of the rest of the eastern range, are much buried in stones and rubbish, which should be removed down to the original ground level.

Extending eastwards from the south end of this range are the ruins of what is in fact a twelfth century house, with some later additions. This probably formed the abbot's *camera*, or set of chambers, and is a very remarkable and almost unique building. It is divided by a broad flight of steps into two parts; the westernmost, of three stories, included a cellar, a living-room, and a bedroom, with adjoining offices one above another; the easternmost had a kitchen and offices on the ground floor, and a chapel above. The safety of this most interesting building is endangered by two large trees; one, a very fine and lofty elm, stands in the middle of the abbot's rooms; the other stands outside the north-east corner of the chapel. The removal of these trees is absolutely necessary. The area of the house should then be carefully excavated, and its arrangements thereby made more clear. The tops of the walls and the window-sills should also be attended to.

To the north of the abbot's house and connected with it by at least one series of chambers, are the ruins of the monks' infirmary. These consist chiefly of the lower parts of the walls of a large hall with a nave and aisles, with various apartments in and about it. All the many small trees growing upon the walls should be carefully removed, and the tops of the walls made good.

Between the hall and the abbot's house, and to the west of the connecting chambers, is an area covered by a considerable accumulation of soil. This area should be carefully excavated and the soil removed, as there are clearly a number of buried features here of great interest, which will show how the infirmary and the abbot's house were connected with the other buildings to the west.

As this and the magnificent example at Fountains are the most complete Cistercian infirmaries we have, every care should be taken to preserve these very interesting remains. The iron railing that has been put up round the abbey buildings should include them, instead of, as at present, leaving them exposed for anybody to run over and destroy.

The buildings forming the range on the south side of the cloister are, unfortunately, greatly ruined, and encumbered with trees. Much as these add to the beauty and picturesqueness of the abbey, they are so great a source of danger to what is left that they ought to be

cut down, and the areas they encumber excavated. Much that is now obscure will then become clear.

In the east end of this range is a passage from the cloister southwards. The original doorway in the cloister was narrowed in later times, and the smaller doorway in turn has been blocked up. When the area of the passage is cleared of the present accumulation of rubbish, this door should be opened, as the filling in is quite modern.

Next to the passage was a large room with a door from the cloister, where the monks could come and warm themselves. The area is now filled with three large trees, and there is a fourth outside. These ought to be removed and the area excavated. The door from the cloister can then be opened out.

West of the warming-house, and forming the middle of the range, are the remains of the monks' dining-hall or frater. After the peculiar fashion of the Cistercians, it stands north and south, with its end against the cloister. Originally it was one lofty apartment, but in the fifteenth century it was divided by a floor midway, and completely altered to form two dining-halls, one over the other. The upper room continued to be the frater proper; the lower room formed the hall where flesh might be eaten. The trees and ivy here ought to be removed, the tops of the walls attended to, and the soil and rubbish on the floor should be cleared away, so as to show the arrangements at the north end where the doors and steps were. The two doorways from the cloister should also be opened out.

At the time of the conversion of the frater into two floors a second kitchen was built at its south-east corner to serve the lower hall. A good deal of this remains, but a little clearing out is advisable, and the walls require making good on top.

The original kitchen is on the west side of the frater. Its north, east, and south walls remain, but the area is filled by two large trees. These ought to be cut down and the area excavated, when the kitchen will probably be found, like that at Fountains, to have had a central fireplace and chimney stack. The walls need clearing of ivy and repairing. The window-sills and other portions also want pointing.

West of the kitchen is an open space in continuation of the lane on the west side of the cloister. The ivy here should be removed, as well as the accumulation of soil and rubbish, under which various walls and other features lie buried.

On the west side of the lane, and joining on to the south-west corner of the church, are the ruins of a building 172 feet long, originally two stories high, the basement being vaulted in eleven bays, with a central row of pillars. Only the north and east walls now remain.

The ground story was divided by partition walls into several apartments. The southernmost of these was the frater of the *conversi* or lay brethren, and had a serving hatch on the east from the kitchen. The whole of the upper floor was the dormer of the *conversi*. It had a door in the middle of the east wall opening on to a flight of steps descending into the lane, with a pentise over, which was continued as far as the church. The ordinary stairs must have been in a kind of porch attached to the west side. The remaining walls of this building are much covered with ivy, all of which should be removed and the masonry pointed. The northern half of the east side is much out of the perpendicular, and is already supported by two ugly buttresses. It would be better to screw the whole upright and underpin it, when the buttresses can be taken away. The area of this building might be excavated to show its limits, and laid down with gravel. The rockwork, etc., west of it might also be removed with advantage, as well as the caretaker's hut.

Running westwards from the south end of this long building is another of some size, still fairly perfect. All its original arrangements have been destroyed. But the fact that the abbey drain runs through it, as well as other evidence, prove it to have been the great *necessarium* for the use of the *conversi*.

If the windows were opened out and glazed, a new roof put on, and the sheds and other obstructions within and without removed, this building might be usefully converted into a place of shelter for visitors. There were originally two wide arches on each side of the basement, now walled up. It would be as well to replace the blocking walls by thinner ones, with windows in them. The present huge opening on the north side had better be walled up, and a door made in one of the arches. All this should be done carefully, lest any remains of old arrangements might be destroyed with the modern work.

Under the whole of the southern side of the buildings runs a large stone drain. This begins a little to the west, at a point where another drain comes down from the site of the fish-ponds on the north west, and there is an interesting series of grooves for sluices at the junctions. This drain might with advantage be cleared out, from, at any rate, its junction with the other drain to where it issues from under the buildings on the east side of the abbot's house. Other drains would probably be found opening into it, and it is quite possible that many curious things would be discovered in it. If necessary, this ancient system of drains could be again put into use.

West of the church was originally the outer court, surrounded by buildings, some small remains of which exist. These should be

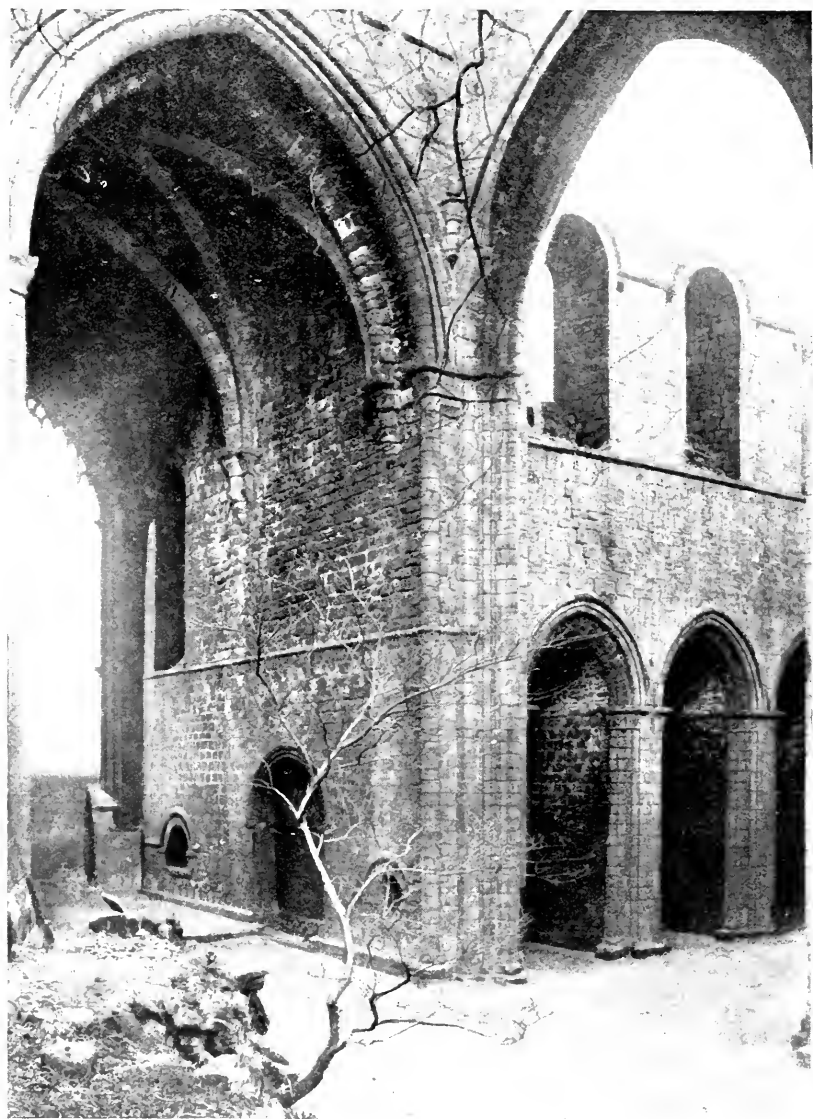
preserved and protected. Excavations here would probably lead to interesting results.

The question of the drainage of the site is one that must be carefully considered. At present all the surface water from the high-road drains immediately on to the site of the abbey, and I am told that a drain has actually been made at some time which passes under the gable of the north transept and discharges into the transept itself. Certain it is that this transept is very wet, and in rainy weather there is quite a pool on the north side of the nave. A deep drain ought to be made on the north, extending quite clear of the buildings both on the east and west, and then running down to the river. The drain in the transept should be taken up, and a proper series of pipes laid down to drain the areas of both transepts. The nave should likewise be similarly drained, either in connection with the transepts or by a separate series of pipes running westwards into the new great drain. The cloister also requires draining by a series of pipes running southwards. Some arrangements will have to be made, too, for carrying off the water from the new roofs over the vaults.

In conclusion, I would remark that it is most important that the ruins be protected from wanton mischief, and suggest that, in addition to reasonable supervision, it would be well that a small fee should be charged for entrance into the enclosed area.

W. H. ST. JOHN HOPE, M.A.

Burlington House, London, W.,
January 20th, 1890.



Photographed by Godfrey Bingley.

Fig. 56. South side of presbytery, and part of east side of south transept, before the late repairs.

The Architecture of Kirkstall Abbey Church,

WITH SOME GENERAL REMARKS ON THE ARCHITECTURE
OF THE CISTERCIANS.

By JOHN BILSON, F.S.A.

INTRODUCTION.

Few periods in the history of English mediaeval architecture are more interesting than the second half of the twelfth century. English architectural writers have generally agreed to call this *the* Transitional period—the period *par excellence* of the transition from Romanesque to Gothic. It is true that this nomenclature has generally been based on the fact that the simultaneous use of semicircular and pointed arches is characteristic of the period in question, and on the mistaken idea that the pointed arch is the essential factor in the evolution of Gothic architecture. The introduction of the pointed arch was, however, of quite secondary importance to the discovery of the ribbed vault, and if this latter be taken as the characteristic of the Transition, the beginning of the Transition in England must be put back to the last decade of the eleventh century. Nevertheless the introduction of the ribbed vault did not at once change the character of the structure. Progress was at first but slow, and it was not until the second half of the twelfth century that architecture definitely entered on the period of transformation, and gradually but rapidly lost its Romanesque character to become what we have agreed to call Gothic.

This alone would suffice to make the second half of the twelfth century a period of the greatest interest to the student of mediaeval architecture. But there is more. From the time of the Conquest, Normandy and England formed a single architectural province, with an exceptionally vigorous architectural manner, which, by the beginning of the twelfth century, had advanced further on the road towards Gothic than any other Romanesque school. It was only during the second quarter of the twelfth century that the school of the Ile-de-France, hitherto of little account, began that marvellously rapid

advance which could not but influence the neighbouring school of Normandy, and a little later and in somewhat less degree that of England. This French influence, exercised most generally, I believe, through Normandy, appears in England shortly after the middle of the twelfth century, and continues to affect English architecture until the end of the thirteenth century. It is not a question of the importation of a foreign style, but rather of continuous influence on a slightly less advanced school working on parallel lines. The influence is none the less important on that account, and it seems idle to attempt, as some English writers have done, to minimise its effect.

But, before the first appearance of this French influence in England, we have to recognise another influence from the Continent, arising from the introduction of the Cistercian order in 1128. This Cistercian influence, Burgundian in its origin,¹ but assuming a very definite character of its own, is a factor of no small importance in the history of English architecture in the twelfth century.

Among the English Cistercian churches of the first generation, Kirkstall is one of the most important. With the exception of the church of its mother-house of Fountains, this is one of the earliest of which anything like complete remains have survived. It is unusually complete, and, except for the loss of its roofs and some quite minor alterations, remains very much as its first builders left it. It would be impossible, therefore, to select a better example for study of the characteristics of the earlier Cistercian architecture in England. Such a study as I propose to attempt in this paper may well utilize what is known of the origin and characteristics of Cistercian architecture to elucidate the genesis of the design of the church of Kirkstall, its plan, structure, and details, and may enable us to distinguish how far its design is due to Cistercian influence, and how far it simply follows the Anglo-Norman manner of its time.

At the outset it will be well to guard ourselves against the misconception that there was ever any specially Cistercian *style*.² None of the monastic orders developed any distinctive and peculiar style of architecture, independent of that of the country in which their churches were built. It is true that Viollet-le-Duc had much to say of the 'Cluniac school,'³ and his theories on this subject have been too often accepted as true. M. Anthyme Saint-Paul has, however, clearly proved

1. For a general analysis of Cistercian architecture, see the chapter *Die Kirchen des Cisterciensordens* in Dehio and von Bezold's *Die Kirchliche Baukunst des Abendlandes* (Stuttgart, 1884), i. 517-537, and C. Enlart, *Origines françaises de l'architecture gothique en Italie* (Paris, 1894), pp. 223 *et seq.* The latter quotes some judicious observations on the subject by M. Anthyme Saint-Paul (pp. 224-228), as well as an excellent summary of the characteristics of Burgundian Romanesque by M. le Comte Robert de Lasteyrie (p. 233, note 1). I have made free use of both these works in this paper. See also E. Sharpe, *The Architecture of the Cistercians* (London, 1874 and 1876), of which only Part i, *General Plan*, was published in two numbers. It contains a sheet of twenty-one small-scale plans of Cistercian abbeys.

2. C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 224.

3. In his *Dictionnaire raisonné de l'architecture française* (i. 130, and elsewhere).

that this so-called 'Cluniac school' had no real existence, and that many of the most important Cluniac churches which were built either at the same time as, or very soon after, the reconstruction of the great mother church¹ differed profoundly from it, both in design and structure². The most that can be said is that the Cluniacs were the means of spreading certain characteristics of plan in countries beyond the home of the order. The churches of the Cistercians, especially those built during the third quarter of the twelfth century, approach much more nearly to a distinctive architectural manner. "A great number of them show such a strong family likeness—similarity of plan and of their principal arrangements, a puritan simplicity strictly enjoined by the regulations of the order, a budding Gothic style applied in a particular manner—that it is very easy to class them apart, and to distinguish them from all other churches of the country in which they were built."³ Nevertheless, their style was not special to the Cistercian order, but sprang entirely from ancient monastic tradition and from the architectural school of Burgundy⁴.

In order to understand the origin of this Cistercian manner of building, and the cause of its widespread influence, it is necessary to notice some salient facts in the history of the rise of the order, and especially that aspect of its ideal of the monastic life which was the motive of the characteristic architectural expression which its buildings assumed.⁵

The foundation of Cîteaux in 1098 was one of several attempts made in the latter part of the eleventh century to reform the Benedictine order. That the Cistercian reform became the most powerful of them all was due in the first instance to the administrative and organising ability of the Englishman, Stephen Harding, the third abbot of Cîteaux,⁶ but the marvellous expansion of the order must be attributed principally to the influence of St. Bernard of Clairvaux, who during the second quarter of the twelfth century was virtually the ruler of western Christendom. During the first fifteen years from its foundation, the history of Cîteaux is that of the struggle of a single monastery. Its expansion into an *order* begins with the foundation of its first four daughter houses, La Ferté in 1113, Pontigny in 1114,

1. Begun in 1089.

2. Anthyme Saint-Paul, *Violet-le-Duc, ses travaux de l'art et son système archéologique* (Paris, 1881), 172 *et seq.*, and in other works there cited. See also M. de Lasteyrie in C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 233, note 1.

3. Anthyme Saint-Paul, *À travers les monuments historiques*, in the *Bulletin Monumental* for 1877, 148 (quoted in C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 224).

4. C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 224.

5. For the general history of the rise of the order and its constitution, see Canon J. T. Fowler's introduction to *Cistercian Statutes*, in the *Yorkshire Archaeological Journal*, ix, 223; the late J. T. Micklethwaite's paper on *The Cistercian Order*, in the *Yorkshire Archaeological Journal*, xv, 245; and Miss Alice M. Cooke's paper, *The Settlement of the Cistercians in England*, in the *English Historical Review*, viii (1893), 625. See also the *Life of St. Stephen Harding*, by J. B. Dalgaurns, new edition with notes by Herbert Thurston (1898); *The Life and Times of St. Bernard*, by James Cotter Morison (London, 1889); and *Le vie de Saint Bernard*, by E. Vacandard, 3rd edition (Paris, 1902).

6. Stephen was abbot from 1109 to 1133, and died in 1134.

Clairvaux (with St. Bernard as its first abbot) and Morimond in 1115; these, with Cîteaux, became the principal houses of the order. When the first Cistercians arrived in England in 1128, the number of abbeys of the order had passed thirty.¹ In 1152, the year of the settlement at Kirkstall, when the general chapter ordered that no more new abbeys should be founded,² the number had reached the extraordinary total of three hundred and thirty-nine,³ of which fifty were in England and Wales. Nevertheless the movement went on, and at the close of the twelfth century, the number had increased to five hundred and twenty-five.⁴

The story of the rise of the order is told by the founders themselves in the *Exordium Cisterciensis Coenobii*,⁵ issued by Stephen Harding in 1120.⁶ The essence of the Cistercian reform was a strict observance of the Benedictine rule in its original simplicity and severity, as it was understood by the founders of Cîteaux. Their first series of regulations,⁷ drawn up probably about 1101, defines the method of its observance as regards clothing, food, renunciation of property in churches and tithes, and so on—the renunciation of the riches of this world to be practised by these “new soldiers of Christ, poor with the poor Christ.”⁸ These regulations deal also with the employment of *conversi* or lay brethren, and paid labourers, for the cultivation of their lands. “because according to the Rule the habitation of monks ought to be in their own cloister.” And, emulating the example of St. Benedict, it was determined that their monasteries should be built, not in cities nor in castles nor in villages, but in places remote from the concourse of people, and that twelve monks with an abbot should be sent out to new foundations.⁹

1. P. Leopold Janaushek, in *Originum Cisterciensium Tom. i* (Vienna, 1877), pp. 16 and 286, gives Waverley, the first English house, as thirty-sixth in chronological order, with the date of foundation as 28 Oct., 1129. On this date see also *Eng. Hist. Rev.* viii. 640.

2. *Instituta Generalis Capituli*, lxxxvi (*Nomasticon Cisterciense*, 231).

3. *Orig. Cist.* i. 294. In Janaushek's list, Kirkstall is No. 231, with the date of foundation as 19 May, 1147 (the Barnoldswick settlement).

4. *Ibid.* i. 299. These numbers do not include nunneries.

5. The *Exordium*, the *Carta Caritatis*, and the *Consuetudines*, including the first collection of *Instituta Generalis Capituli*, have been printed from early texts by Ph. Guignard in *Les Monuments primitifs de la Règle Cistercienne* (Dijon, 1878), and also in the new edition of the *Nomasticon Cisterciense* (a revision of the original edition of 1664), ed. by H. Séjalon (Solesmes, 1892). The latter also contains those Statutes of the General Chapters of the Order from 1157 to 1194 which were either omitted or printed incorrectly by Martène and Durand in *Thesaurus Novus Artedotorum*, vol. iv (Paris, 1717), and those from 1194 to 1221 in full. It also contains the collection of *Instituta* of 1240 and 1256, which were printed from another text, once belonging to the abbey of Fontenay and now in the British Museum, by Canon J. T. Fowier in the *Yorkshire Archaeological Journal*, vols. ix and x. The references to the *Nomasticon* in the foot-notes below are all to the new edition.

6. Guignard (*op. cit.* preface, p. xxx) thinks that the *Exordium* was drawn up by Stephen to be presented to Pope Calixtus II when he was asked to confirm the *Carta Caritatis* in 1119, and that Stephen afterwards added the prologue and the paragraph xviii, *De Abbatibus*, at the end, and issued it for the guidance of the order.

7. *Exordium*, xv. *Instituta monachorum Cisterciensium de Molismo venientium*. “Dehinc Abbas ille” (i.e. Albericus) “et fratres ejus, non immemores sponsonis suae, Regulam beati Benedicti in loco illo ordinare, et unanimiter statuerunt tenere; rejicientes a se quidquid Regulae refragabatur.” (*Nom. Cist.* 62). Cf. *Instituta Generalis Capituli*, ii (*Nom. Cist.* 212).

8. “Novi milites Christi cum paupere Christo pauperes.” *Exordium*, xv (*Nom. Cist.* 63).

9. “Quia etiam beatum Benedictum non in civitatibus, nec in castellis aut in villis, sed in locis a frequentia populi semotis coenobia construxisse sancti viri illi sciebant, idem se aemulari promittebant. Ut sicut ille monasteria constructa per duodenos monachos adjuncto patre abbate disponebat, sic se acturos confirmabant.” *Exordium*, xv (*Nom. Cist.* 63). Cf. *Instituta Generalis Capituli*, i and xii (*Nom. Cist.* 212, 215).

The second series of regulations¹ appears to have been drawn up by Stephen Harding immediately after he became abbot in 1109. By these they determined that they would not have in the house of God, wherein they desired to serve God devoutly by day and night, anything which savoured of pride or superfluity, or which might ever corrupt the poverty which they had chosen of their own free will, as the custodian of the virtues.² So their crosses were not to be of gold or silver, but of painted wood: their single candlestick was to be of iron, and the censers only of copper or iron. Silk was forbidden, except for stoles and fanons; gold and silver were also forbidden, except that the chalice and pipe were to be of silver.³ We know, too, from other sources that their first buildings were of the utmost simplicity, entirely destitute of any adornment.

The *Carta Caritatis*, the real constitution of the Cistercian order, which was probably drawn up between 1115 and 1118,⁴ and received papal confirmation in 1119,⁵ insists strongly on uniformity in the observance of the rule of St. Benedict as it is observed in the New Monastery (Cîteaux). No other sense is to be read into it, but "as the monks of the New Monastery have understood it and held it, and as we to-day understand it and hold it, so let them too understand it and hold it."⁶ The provisions of this constitution for a system of regular visitation of all the monasteries of the order by the abbot of their mother-house, including the visitation of Cîteaux itself by the abbots of La Ferté, Pontigny, Clairvaux and Morimond, and the institution of the annual general chapter of the order, were admirably designed to secure the desired uniformity of observance. To the same causes must be attributed the remarkable uniformity in the planning of Cistercian monasteries, and in some of their architectural dispositions, which, with the severe simplicity of their design, gives them so strongly marked an individuality.

The first collection of the Statutes of the General Chapters, compiled by Raynard, fifth (sometimes called fourth) abbot of Cîteaux, is generally attributed to the year 1134,⁷ but it was not completed until 1152⁸. The first ten statutes are based on the *Carta Caritatis* and on

1. *Exordium*, xvii. *De morte primi Abbatis et promotione secundi, et de institutis et laetitias eorum.* (*Nom. Cist.* 63).

2. "Deinde ne quid in domo Dei, in qua die ac nocte Deo devote servire cupiebant, remaneret, quod superbiam aut superfluitatem redoleret, aut paupertatem custodem virtutum quam sponte elegerant, aliquando corrumpere." *Exordium*, xvii (*Nom. Cist.* 64).

3. See this passage at length in the *Exordium*, xvii (*Nom. Cist.* 64), and in Mr. Micklethwaite's translation in the *Yorkshire Archaeological Journal*, xv. 255.

4. Guignard, *Les Monuments primitifs*, preface, p. lxiii.

5. Bull of Calixtus II, 23 Dec., 1119 (*Nom. Cist.* 73).

6. *Carta Caritatis*, 1 (*Nom. Cist.* 69).

7. Guignard, *Les Monuments primitifs*, preface, p. xv.

8. This first collection includes ninety-two statutes. The fifty-eighth was, according to the author of the *Magnum Exordium*, enacted by the general chapter of 1137 (*Nom. Cist.* p. xiii). The eighty-sixth is the statute of 1152 which ordered that no more new abbeys were to be founded,

the *Instituta* contained in the *Exordium*,¹ which have been noticed above. Of the remainder, only very few have any bearing on their buildings, and both these and similar statutes in the later collections are of the nature of prohibitions of things which were considered to be inconsistent with the simplicity and uniformity enjoined in the earliest regulations. Of the two statutes which are most important in this connection, one forbids sculptures or pictures "in our churches or in any of the monastic buildings, because while attention is paid to such things, the profit of godly meditation or the discipline of religious gravity is often neglected." Still painted crosses were permitted, provided they were of wood.² The other orders that letters shall be of one colour and not painted,³ and that glazing shall be white, without crosses or pictures.⁴ Similar prohibitions are found in later statutes. In 1182 it was ordered that painted windows should be reformed within two years.⁵ In 1213 the prohibition of sculptures and pictures (except the image of the Redeemer) is repeated, with the additional prohibition of elaborate pavements,⁶ and this latter is repeated in 1218.⁷ The curious permission to paint the doors of the churches white must be regarded as a significant relaxation of the absolute prohibition of painting.⁸ The oft-quoted prohibition of stone bell-towers occurs first in 1157,⁹ when it was also ordered that bells should not exceed five hundred pounds in weight, so that one person might ring them, and two should never be rung together.¹⁰ All these are merely negative proscriptions¹¹ of things which "savoured of pride or superfluity," and, although they had an important effect on the physiognomy of their buildings, they were in themselves hardly sufficient to constitute a separate architectural type.

1. See the comparison in parallel columns in Guignard, *Les Monuments primitifs*, preface, pp. xxxvi-xli.

2. *Instituta Generalis Capituli*, xx. "Sculpturae vel picturae in ecclesiis nostris seu in officinis aliquibus monasterii ne fiant interdiximus, quia dum talibus intenditur, utilitas bonae meditationis vel disciplinae religiosae gravitatis saepe negligitur. Cruces tamen pictas quae sint lignae habemus." (*Nom. Cist.* 217).

3. The Bible executed under the direction of Stephen Harding, and completed in 1109, is a richly ornamented work, and in no way conforms to the standard of simplicity inculcated by this later statute. See Father Thurston's note in Dalgairns' *Life of St. Stephen Harding*, 150-155; Vacandard, *l'ie de Saint Bernard*, i. 54; and Arthur Haseloff in *Histoire de l'Art*, ed. by André Michel, ii. 298.

4. *Instituta Generalis Capituli*, lxxx. "Litterae unius coloris fiant, et non depictae. Vitreae albae fiant, et sine crucibus et picturis." (*Nom. Cist.* 230). The account of the visit of the Queen of Sicily to Clairvaux in 1517 notes that the windows of the church were glazed with white glass (Didron's *Annales archéologiques*, iii. 226). For the white glazing of the Cistercian churches of Bonlieu (Creuse), Pontigny (Yonne), and Obazine (Corrèze), see Viollet-le-Duc, *Dictionnaire*, ix. 459-460, and *Annales archéologiques* x. 81 et seq.

5. *Statuta Gen. Cap.* Anno 1182. "Vitreae depictae infra terminum duorum annorum emendantur; aliqui ex tunc Abbas et prior, et cellararius omni sexta feria jejunent in pane et aqua, donec sint emendatae." (*Nom. Cist.* 261).

6. *Ibid.* Anno 1213. "Inhibetur ne de cetero fiant in Ordine picturae, praeter imaginem Redemptoris, nec sculpturae, nec varietates pavimentorum, nec superfluitates aedificiorum et victualium." (*Nom. Cist.* 279).

7. *Ibid.* Anno 1218. "Praecipitur ut omnes varietates pavimentorum de ecclesiis nostris infra sequens Capitulum amoveantur. Ab eo autem tempore, Abbas in cujus domo id non fuerit emendatum, ad Capitulum generale veniat super hoc veniam petiturus." (*Nom. Cist.* 282).

8. *Ibid.* Anno 1157. "Portas vel ostia ecclesiae suae albo colore qui voluerit poterit colorare." (Martene and Durand, *Thesaurus Novus Anecdotorum*, iv. 1247).

9. *Ibid.* Anno 1157. "Turres lapideae ad campanas non fiant." (*Ibid.* iv. 1247).

10. *Ibid.* Anno 1157. "Campanae nostri Ordinis non excedant pondus quingentarum librarum: ita ut unus pulset, et nunquam simul pulsantur duae." (*Nom. Cist.* 260).

11. It is unnecessary to quote the thirteenth-century collection of statutes, for they are easily accessible in Canon J. T. Fowler's edition mentioned above.

The extreme asceticism of the first Cistercians was a standing protest against the comparative laxity of the other Benedictines. The great order of Cluny, itself originally a return to the primitive simplicity of the Benedictine Rule, had been the most powerful agent in the monastic reform of the eleventh century, but, in becoming a great political and territorial power, it was in the twelfth century losing its religious influence, which was passing to the new reformed orders. The inevitable rivalry between Cistercians and Cluniacs culminated in the controversy between St. Bernard and Peter the Venerable, abbot of Cluny, himself a reformer. St. Bernard's *Apologia*, which was written about the year 1124,¹ is mainly a defence of the Cistercian manner of observing the Rule, and a denunciation of laxity and luxury, but it contains the following striking passage which excellently illustrates the extreme Cistercian view of art :—

“ But these are small matters. I pass on to greater ones, which seem less only because they are more common. I will not speak of the immense height of the churches, of their immoderate length, of their superfluous breadth,² costly polishing, and strange designs, which, while they attract the eyes of the worshipper, hinder the soul's devotion, and somehow remind me of the old Jewish ritual. However, let all this pass ; we will suppose it is done, as we are told, for the glory of God. But, a monk myself, I do ask other monks (the question and reproach were addressed by a pagan to pagans),³ ‘ Tell me, O ye professors of poverty, what does gold do in a holy place ? ’ The case of bishops and monks is not the same. We know that they, as debtors to the wise and foolish, when they cannot rouse the sense of religion in the carnal multitude by spiritual means, must do so by ornaments that appeal to the senses. But among us, who have gone out from among the people ; among us, who have forsaken whatever things are fair and costly for Christ's sake ; who have regarded all things beautiful to the eye, soft to the ear, agreeable to the smell, sweet to the taste, pleasant to the touch—all things, in a word, which can gratify the body—as dross and dung, that we might gain Christ, of whom among us, I ask, can devotion be excited by such means ?

“ Or, to speak plainly, is it not avarice—that is, the worship of idols—which does all this ? from which we do not expect spiritual fruit, but worldly benefit. . . . So carefully is the money

1. Vacandard, *Vie de Saint Bernard*, préface p. xx, and i. 108-132.

2. The abbey church of Cluny, begun in 1089 and consecrated in 1131, was the largest church of its time ; it had double aisles, double transept, and ambulatory with radiating chapels. For its plan see J. Virey, *Architecture romane dans le diocèse de Mâcon* ; Viollet-le-Duc, *Dictionnaire* i. 258 ; Delio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, pl. 120 (1) ; and C. Enlart, *Manuel d'archéologie française*, i. 236.

3. “ Dicite, Pontifices, in sancto quid facit aurum ? ” PERS. Sat. ii. v. 69.

laid out, that it returns multiplied many times. It is spent that it may be increased, and plenty is born of profusion. By the sight of wonderful and costly vanities men are prompted to give rather than to pray. Some beautiful picture of a saint is exhibited—and the brighter the colours the greater the holiness attributed to it; men run, eager to kiss; they are invited to give, and the beautiful is more admired than the sacred is revered. In the churches are suspended, not *coronae*, but wheels studded with gems, and surrounded by lights, which are scarcely brighter than the precious stones which are near them. Instead of candlesticks, we behold great trees of brass, fashioned with wonderful skill, and glittering as much through their jewels as their lights.¹ What do you suppose is the object of all this? The repentance of the contrite, or the admiration of the gazers? Oh vanity of vanities! but not more vain than foolish. The church's walls are resplendent, but the poor are not there..... The curious find wherewith to amuse themselves; the wretched find no stay for them in their misery. Why, at least, do we not reverence the images of the saints, with which the very pavement we walk on is covered. Often an angel's mouth is spit into, and the face of some saint trodden on by the passers by..... But if we cannot do without the images, why can we not spare the brilliant colours? What has all this to do with monks, with professors of poverty, with men of spiritual minds?

“Again, in the cloisters, what is the meaning of those ridiculous monsters, of that deformed beauty, that beautiful deformity, before the very eyes of the brethren when reading? What are disgusting monkeys there for, or ferocious lions, or monstrous centaurs, or spotted tigers, or fighting soldiers, or huntsmen sounding the bugle? You may see there one head with many bodies, or one body with numerous heads. Here is a quadruped with a serpent's tail; there is a fish with a beast's head; there a creature, in front a horse, behind a goat; another has horns at one end, and a horse's tail at the other. In fact, such an endless variety of forms appears everywhere, that it is more pleasant to read in the stonework than in books, and to spend the day in admiring these oddities than in meditating on the law of God. Good God! if we are not ashamed of these absurdities, why do we not grieve at the cost of them?”²

It is possible that, as is frequently the case in polemical writing,

1. The great *candelabrum* before the high altar of Cluny was the gift of Queen Matilda, wife of Henry I (Vacandard, *Vie de Saint Bernard*, i. 118).

2. The translation is from J. Cotter Morison, *The Life and Times of Saint Bernard*, 130-132.

there was a touch of exaggeration in St. Bernard's denunciation of art,¹ though it seems to be true enough that the earlier generation of Cistercians did succeed in banishing the decorative arts almost entirely from their churches. But, so far as the mother art of architecture was concerned, this negative attitude towards art was overmastered by the creative impulse of the twelfth century.² By the prohibition of sculpture and superfluous decoration, the Cistercian builders were thrown back on the logical expression of practical and structural essentials, the fundamental basis of all true architecture. The result was that the design of their buildings was forcible and direct, remarkably pure, and, although severe, it was admirably expressive of the needs which inspired it. The construction was well thought out, and generally executed with great care.³ The simplicity of detail is in striking contrast with the excess of ornament to which the latter Romanesque builders were addicted, and, although the absolute rejection of all ornament weakened gradually as time went on, it was always sober and restrained. The internal aspect of their churches must have differed profoundly from that of other great contemporary churches in one respect which we have some difficulty in realising now—the entire absence of colour. No painted walls, only white glass in the windows, the general absence of rich materials and colour in decorative accessories—these must indeed have contrasted strongly with the glowing beauty of which too often but faint traces remain for our admiration.

We have already seen that the peculiar constitution of the Cistercian order must have acted as a powerful influence in promoting uniformity in the character of their buildings. The constant association of the rulers of the order in the annual general chapter, and in the visitations of monasteries by the abbots of their mother houses, must have tended to produce this result. In some cases we have evidence that other influences played their part in this direction. Experienced monks were sent out from the chief houses of the order to direct the operations of new foundations. Geoffrey of Ainaï,⁴ an old monk of Clairvaux, was sent by St. Bernard to Fountains, to instruct the brethren in the first principles of the rule, and their earliest buildings were erected according to his counsel. He had been similarly employed by St. Bernard on other new foundations.⁵ Achard, master of the

1. His attitude is indicated by a story told of his visit to the Cistercian abbey of Hautecombe (Savoie): "On dit que saint Bernard l'ayant vû en fut scandalizé, et que d'un esprit prophétique il dit: *Tu es trop belle, Haute-combe ma mignone, tu ne pourras pas subsister*" (*Voyage littéraire de deux religieux Bénédictins de la Congrégation de Saint-Maur* (Paris, 1717), vol. i. part i. p. 240).

2. "The task of the Cistercians was the translation of their motto, Renunciation and Work, into the language of architecture, and they created the truest and most real monk-style known in the history of art." Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, i. 519.

3. Mr. Micklethwaite went so far as to say, "a badly-built Cistercian wall is a thing unknown." (*Yorkshire Archaeological Journal*, vii. 241).

4. Vacandard, *l'ie de Saint Bernard*, ii. 403 and 404, n.l.

5. *Memorials of the abbey of St. Mary of Fountains* (Surtzess Soc., 42), i. 46-47.

novices at Clairvaux, was also sent by St. Bernard to many French and German monasteries to direct their building operations.¹ Monks and *conversi* worked, with the assistance of hired workmen, on the rebuilding of Clairvaux (begun 1133 or 1135).² In the building of Walkenried twenty-one lay brethren were employed as masons, wallers, and carpenters, under the direction of two monks.³ Among the first occupants of Victring, in Carinthia, who came from Villers in Lorraine, were *conversi barbatii diversis artibus periti*.⁴ Dehio and von Bezold think that these examples, considered in connection with the practice of excluding seculars as far as possible from their monasteries, suggest the probability that in the majority of cases the Cistercians executed their buildings by means of their own resources.⁵

This characteristic uniformity in Cistercian building has an important bearing on the general history of architecture of the twelfth century. The constructive system of Cistercian churches outside Burgundy sometimes follows local methods, but frequently the system is an importation from Burgundy, differing only in its simplicity from the methods of that province. The pointed arch, which was in general use in earlier Burgundian architecture, was adopted throughout for the arches of construction. From about the middle of the twelfth century, the Burgundian school developed a type of construction which was already essentially Gothic, related to, perhaps inspired from, but not precisely the same as, the early Gothic of France proper. The ribbed vault was used systematically over a continuous series of oblong bays,⁶ usually without flying buttresses or triforium. The importation of this type by the Cistercians into countries where the native Romanesque was still all-powerful was the first introduction of Gothic architecture into these countries. The Cistercians have been called the missionaries of French art in Germany, and this is even more true of Italy.⁷ In England, as we shall see, the case was different. Some of the leading features of the Burgundian architecture of the Cistercians were no novelties to the Anglo-Norman builders, whose first attempts in the development of the ribbed vault were much earlier than those of the Burgundian school. So far as structure is concerned, the chief

1. Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, i. 520.

2. *S. Bernardi Vita Prima*, lib. ii. *auctore Ernaldo*, cap. v. no. 31 (in Migne, *Patr. Lat.* vol. 185, col. 285).

3. Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, i. 520.

4. *Ibid.* i. 521.

5. *Ibid.* i. 521. They quote, conversely, the statute of 1157 (No. 47): "*Monachos vel conversos artifices ad operandum secularibus concedi non licet*" (*Thes. Nov. Anecd.* iv. 1250). At San Galgano, six masters of the work from 1218 to 1278 were monks; Ugolino di Maffeo (1276-1294) is described in the chartulary as *conversus, magister operis lapidum*, and in 1282 a *conversus, frater Matheus*, is called *magister operis lignaminis*. On the other hand, three *conversi* of San Galgano were masters of the work at Siena cathedral between 1259 and 1284 (C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 13, 17, and *L'abbaye de San Galgano près Sienna au XIII^e siècle*, in the *Mélanges de l'École de Rome*, 1891). In 1517 the master-mason or master of the works at Clairvaux was a *conversus* (*Annales archéologiques*, iii. 236, 239).

6. The sexpartite vault over double bays was then general in the Ile-de-France, afterwards to be superseded by the oblong-bay plan.

7. C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 223, etc.

contribution of the Cistercians to English architecture was the introduction of the systematic use of the pointed arch.

Let us now pass from these general considerations to the study of the architecture of the church of Kirkstall itself, and let us consider in turn its plan, structure, and details. Under the first heading, a digression on the general history of Cistercian church-plan in the twelfth century may perhaps be permitted.

In the first place, however, it is necessary to clear the ground by a few words as to the date of the construction of the original buildings. The documentary evidence is limited to the statement¹ that the church, the cloister, and the buildings surrounding it were erected between 1152, the date of the first settlement at Kirkstall, and 1182, when the first abbot, Alexander, died.² According to the statutes, a new monastery could only be formed when certain buildings were ready to receive the monks.³ At Cîteaux itself the first buildings constructed by the founders of the order, with the assistance of duke Odo of Burgundy (1098), were of wood.⁴ Following the example of the chief house of the order, the first settlement of a new foundation must generally have occupied buildings of a purely temporary character, to be succeeded by the erection of permanent buildings as their means permitted, and we may safely assume that this was the case at Kirkstall. Unlike its mother-house of Fountains, whose early history seems to reproduce the struggles of the first years of Cîteaux, Kirkstall was fortunate in having from the first a powerful and benevolent patron in Henry de Lacy. The monks were therefore in a position to proceed at once with the erection of permanent buildings. They began, as usual, with the church, which was built gradually from east to west, but as a continuous work apparently without any definite pause, such breaks as are to be seen in the masonry being merely breaks between the succeeding stages of what was really one continuous build. The range of buildings on the east side of the cloister seems to have been a continuation of the south transept work, and from the character of their details the chapter-house and parlour appear to be practically contemporary with the lower part of the west front of the church. The western range (*cellarium*) seems to be a continuation of the work of the south aisle of the church,⁵ but it was carried up before the west

1. In the *Fundacio Abbatiæ de Kyrkestall*, printed from an early fifteenth-century MS. in *Thoresby Society's Miscellanea*, iv. 169, with translation by Mr. E. Kitson Clark, F.S.A.

2. See Mr. W. H. St. John Hope's paper, *supra*, p. 4.

3. *Instituta Generalis Capituli*, xii (first collection). "*Quomodo novella ecclesia Abbate et monachis et ceteris necessariis ordinetur.* Duodecim monachi cum Abbate tertio decimo ad coenobia nova transmittantur: nec tamen illuc destinentur donec locus libris, domibus et necessariis aptetur, libris duntaxat missali, Regula, libro Usuum, psalterio, hymnario, collectaneo, lectionario, antiphonario, gradali; domibusque, oratorio, refectorio, dormitorio, cella hospitum et portarii, necessariis etiam temporalibus: ut et vivere, et Regulam ibidem domum valeant observare." (*Nom. Cist.* 215).

4. *Exordium*, iii. "... monasterium ligneum quod inceperunt de suis totum consummavit." (*Nom. Cist.* 55).

5. See the jointing of the masonry in the angle between the wall of the south aisle and the east wall of the *cellarium*, shown in fig. 53.

front of the church was built. The last parts of the church to be built were the north clearstory of the nave and the upper part of the west front. Judging from the fragments of the cloister arcades which have survived, it would appear that, after the buildings around the cloister and the church itself had been finished, the alleys of the cloister were roofed in, as the last work of the original buildings; and, from the character of the details of the cloister arcades, this work was probably executed within the decade preceding the death of abbot Alexander in 1182.¹

We may therefore, I think, safely conclude that the building of the church was begun immediately after the settlement of the convent at Kirkstall in 1152, and that it was finished in some fifteen, or at most twenty, years from that date.²

PLAN.

The uniformity of observance and practice so earnestly inculcated by the founders of the Cistercian order finds striking expression in the planning of its buildings. This is true, not only of its church-plan, but also of the planning of its monastic buildings, which has been so excellently elucidated in Mr. Hope's admirable monographs. Kirkstall presents a very complete and perfect example of the typical Cistercian church-plan, the origin and development of which I will now make some attempt to trace.

It is doubtful whether any remains have survived of any Cistercian church built during the first thirty years following the foundation of the order. The slight evidence available as to the earliest permanent churches seems to indicate that they were very small and simple buildings, presenting no very special characteristics of plan. The first stone church at Cîteaux, said to have been consecrated in 1106, was still in existence in 1708, when it was visited by the learned Benedictines of St. Maur; they describe it as a small vaulted building some 15 feet in width, and of proportionate length, the choir being

1. As these conclusions differ slightly in some points from those set forth by Mr. Hope in his paper, I add here some notes on the points in question. In the south-east angle of the south transept, the fact that the bed-joints of the lowest courses of the masonry range from the south wall (gable-end) of the transept, through the south respond pier of the south chapel, to the south wall of this chapel, proves that the east and south walls of the south transept are of one build. The bed-joints also range in the clearstory at this angle. I believe that the vaults of the eastern and western ranges were constructed with the walls, and in most cases the bed-joints of the vault-supports range with those of the walling. The transverse ribs of the vaults of the parlour and *cellarium* have the same profile as the transverse ribs of the vaults of the nave aisles, but the diagonal ribs of both the former have a keeled roll, similar to those of the diagonal ribs of the chapter-house vault. In the vault-corbels on the east and west walls of the sub-vault of the dorter, all the abaci are square-planned (as in the church), but in the corbels in the centre of the north and south walls the side corbels (of the group of three) have circular-planned abaci (fig. 77), a feature which does not occur anywhere in the church, though it occurs in all the vault-corbels of the *cellarium*. The bases of the cylindrical piers of the sub-vault of the dorter and those of the wall-shafts of the chapter-house have a profile similar to that of the more advanced bases of the nave-arcade piers (fig. 78, N.W. respond). In the western arches of the chapter-house, the profile of the middle order is the same as that of the second order in the west doorway of the church, and the profile of the outer order is the same as that of the outer order of the west window arches of the church. From these and other indications I conclude that the church was well advanced before the buildings around the cloister were commenced, and that these were in course of construction while the nave was being built.

2. I am inclined to think that the lesser limit is the more likely to be correct.

about 30 feet long; there were three windows in the sanctuary, and two in the nave.¹ The church of the *monasterium vetus* at Clairvaux seems to have been a square building with three altars—the high altar dedicated to the Virgin, and two others behind, against the east wall.² The first stone church at Pontigny was probably a simple oblong building.³ Evidently what we know as the normal plan of a Cistercian church had not been evolved when these earliest churches were built.

The establishment of a definite type of plan would be a natural consequence of the rapid increase in the number of new foundations. Up to the end of 1119, only twelve monasteries of the order had been founded; during the ten years 1120-1129, the number of new foundations was twenty-five; and during the ten years 1130-1139, one hundred and five.⁴ It is in the course of this last decade that we find certain proof that the characteristic Cistercian plan had been definitely adopted for the new churches of the order.

Severely practical as was the Cistercian reform in all things, their church plan was designed to meet the strictly practical necessities of their worship, which for them was the *opus Dei*, the *opus divinum*. They required a sanctuary for the high altar, a choir for the monks and novices, a choir for the *conversi*, and a sufficient number of chapels where such of the monks as were priests could celebrate mass. No plan could be designed to meet these requirements with greater simplicity and directness than the typical plan of which Kirkstall affords such an excellent example. A cruciform church, with a short presbytery or sanctuary to the east of the crossing; westward of the crossing a long nave, the eastern part of which formed the choir of the monks,⁵ and the western part the choir of the *conversi*; chapels on the east side of each arm of the transept; and an aisle on each side of the nave to facilitate communication between the different parts of the church;

1. "Un des plus venerables endroits de Cîteaux, c'est l'ancien monastere, qui fut habité par les premiers religieux de ce saint lieu, et où saint Bernard fut reçu. L'église en fut consacrée l'an 1106, par Gautier évêque de Chalon. Elle est assez petite, et je ne crois pas qu'elle ait plus de quinze pieds de largeur; la longueur est proportionnée; le chœur peut avoir trente pieds. Elle est voutée et fort joüe. Il y a dans le sanctuaire trois fenêtres et deux dans la nef; et c'est assurément ce que l'on entend par cet endroit de la vie de saint Bernard, où il est dit, qu'il étoit si mortifié, qu'il ne sçavoit pas qu'il n'y avoit dans l'église que trois fenêtres, ce qui doit s'entendre du sanctuaire. Ce fut là que saint Etienne et saint Alberic furent enterrez. On l'appelle aujourd'hui la chapelle de saint Edme, par la devotion particuliere que quelque abbé aura eu à ce grand Saint" (*Voyage littéraire*, vol. i. part i. pp. 223, 224).

2. For a description of the *monasterium vetus*, see Vacandard, *Vie de Saint Bernard*, i. 67-69, and the authorities there cited.

3. *Voyage littéraire*, vol. i. part i. p. 58: "On voit derriere cette église les mazes de l'ancienne, c'est-à-dire, de la première église de Pontigny. Elle étoit petite, mais assez belle pour le temps." Viollet-le-Duc's plan of Pontigny (*Dictionnaire*, i. 272, at B on fig. 8) shows this first church, to the south-east of the later church, as an oblong building terminating eastward in an apse, and this plan is apparently copied from a plan in *L'abbaye de Pontigny* by Baron Chaillou des Barres (Paris, 1844), "d'après un dessin levé en 1760." Henry's *Histoire de l'abbaye de Pontigny* (Auxerre, 1839) contains a plan "levé en 1760," evidently the same plan, but here, however, the first church is shown as a small rectangular building without an apse.

4. These numbers are from Janaschek's list, *Orig. Cist.* i. 286-289. In the following decades the numbers were:—1140-1149, one hundred and fifty-seven (including twenty-eight of the order of Savigny, which was merged in the Cistercian order in 1147); 1150-1159, sixty-three; after which the number of new foundations gradually declined.

5. Most frequently the monks' stalls extended into the crossing, as at Kirkstall.

such was the plan almost universally adopted in the golden age of the order.¹

In searching for the origin of this plan, we must remember that it was not possible for the Cistercians, any more than for other innovators in architecture, to ignore the building traditions of their time. Dehio and von Bezold suggest that the plan of the eastern part, its most characteristic feature, must be interpreted as a reversion to the 'old Cluniac' plan,² at a time when Cluny itself had rebuilt its great church with an ambulatory and radiating chapels. However this may be, the Cistercian plan resembles, in its general arrangement, a plan, common enough at the end of the eleventh and beginning of the twelfth century, which had an aisleless apsidal eastern arm, and apsidal chapels on the east side of the transept—a plan of which we have an important example in our own country in the late eleventh-century church of St. Mary's Abbey, York.³ The Cistercians may have arrived at their plan by substituting square ends for the apses of the presbytery and transept chapels in such a plan. They certainly adopted the simplest features known to them. The rural churches of Burgundy (as of north-western France and England) most commonly had square east ends, which were not unknown in larger churches. An example of a short rectangular presbytery in a cruciform church with aisles to the nave is to be found in the church of Saint-Savinien, Sens, which dates from about the middle of the eleventh century. With the knowledge of such simple plans, the Cistercians rejected the apsidal termination of the eastern arm in favour of the rectangular plan, which was easier to build, to vault, and to roof. So too, for the apsidal chapels opening from the east side of the transept, they substituted a row of rectangular chapels which could be covered by a continuous lean-to roof, so avoiding all complications of roofing and roof-drainage. For them, everything must be simple and serviceable.

1. Except for nuns' churches, which were often not cruciform, no chapels being required.

2. *Die Kirchliche Baukunst des Abendlandes*, i. 527. Dehio and von Bezold see the influence of the 'old Cluniac' plan in the church of Vaux-de-Cernay (Seine-et-Oise), which had two apsidal chapels *en échelon* on the east side of each arm of the transept, flanking a rectangular presbytery, and they attribute its plan to c. 1130, which I venture to think is too early. Vaux-de-Cernay belonged to the order of Savigny, and only became Cistercian with the other abbeys of that order in 1147. In his *Étude archéologique sur l'abbaye de Notre-Dame des Vaux-de-Cernay* (*Société archéologique de Rambouillet*, vol. xviii, Tours, 1889), M. L. Morize expresses the opinion that the church was only begun after 1147 (p. 71). However, the discovery at Furness—which had also belonged to the order of Savigny—of the foundations of identical apsidal chapels *en échelon* to the transept, dating almost certainly from before 1147 (W. H. St. John Hope, *The Abbey of St. Mary-in-Furness*, in the Cumberland and Westmorland Antiquarian and Archaeological Society's *Transactions*, vol. xvi) indicates the strong probability that the plan is not Cistercian at all, but dates in both cases from the Savigny period, as was suggested by Mr. Harold Brakspear in his paper *On the first church at Furness* (in the *Transactions of the Lancashire and Cheshire Antiquarian Society*, vol. xviii). After an examination of what remains of the church of Vaux-de-Cernay, I think that its plan was probably laid down, and some of its eastern parts built, before 1147, but that the works only proceeded slowly, and that the church was not finished before the end of the twelfth century. The rectangular presbytery is, I believe, original. The curious construction of arches under the eaves between the two chapels and between the inner chapel and the presbytery, in order that the chapels might be covered with a continuous lean-to roof, is doubtless Cistercian. For plan of the church, see M. Morize's *Étude*, pl. ii, and Viollet-le-Duc, *Dictionnaire*, i. 274.

3. *Archæological Journal*, lxiii. 114. *Yorkshire Archaeological Society, York programme* of July 24, 1903.

It is not necessary to attempt any elaborate classification of the plans of Cistercian churches. Almost all the plans that are characteristically Cistercian either follow the typical plan adopted at Kirkstall, or show an extension of the eastern arm in order to provide a greater number of chapels, contrived with an ambulatory, either rectangular or semicircular on plan. Variants of the typical plan are for the most part simply modifications of the rectangular form of the presbytery or transept chapels caused by following local methods.¹

For the purpose of comparison, the plans of fourteen Cistercian churches, drawn to the same scale, are illustrated on fig. 96.² The eight upper plans show the normal type, while the six below are examples of eastern extension.

From the descriptions quoted above, it would appear to be probable that the first stone churches of Cîteaux and Pontigny were small single-naved buildings without aisles. The necessity of providing chapels, however, involved the adoption of a cruciform plan, which in its simplest form is represented by the plan of which Mr. Harold Brakspear has discovered the foundations at Waverley, the first Cistercian foundation in England. This small and most interesting plan³ (fig. 96) represents the first permanent church of Waverley, which must have been built not long after the foundation of the abbey in 1128. Mr. Brakspear has also found evidence which proves that the first permanent church of the sister house of Tintern (founded 1131) had a similar aisleless plan.⁴ The church of Lysa, the first Cistercian foundation in Norway, has a very similar plan⁵ (fig. 96), the only essential difference being that at Lysa the main walls are continued across the transept, which does not form a complete crossing as at Waverley. Lysa, founded in 1146, was a daughter-house of Fountains, and its first abbot was one of the monks who had left St. Mary's, York, in 1132, to share the hardships of the first settlement at Fountains.⁶

As a rule, however, each arm of the transept had more than one chapel, and the nave was provided with aisles to serve as passage-ways between the several parts of the church. Among the earliest surviving examples of this plan are Clairvaux (of which more presently),

1. In his *Étude sur les églises de l'ordre de Cîteaux*, which forms the introduction to M. Morize's work on Vaux-de-Cernay (cited above, p. 86, note 2), M. le Comte A. de Dion gives a classification which loses much of its value because it takes no account of chronological development. Dehio and von Bezold (*Die Kirchliche Baukunst des Abendlandes*, i. 527) give a classification in five divisions, of which the first, represented by Vaux-de-Cernay, is not, I believe, Cistercian at all; it is very unlikely, too, that this was the plan of the first Cîteaux, as they suggest. Their fourth division is simply the normal plan with an apse substituted for the square end of the presbytery. There is a better classification, with diagrams, in A. Holtmeier, *Cisterzienserkirchen Thüringens* (Jena, 1906), p. 70.

2. The authorities for the plans in fig. 96 are given in the foot-notes below. The light shading on some of the plans shows walls which either have been altogether destroyed, or are now represented only by foundations or by walls below window-level. The cross-hatching shows later extensions.

3. From the plan by Mr. Harold Brakspear, *Waverley Abbey* (Surrey Archaeological Society, 1905), p. 9.

4. *Archæological Journal*, lxi. 213, with plan.

5. From N. Nicolaysen, *Om Lysekloster og dets ruiner* (Christiania, 1890), pl. 1.

6. *Memorials of the abbey of St. Mary of Fountains* (Surtees Soc. 42), i. 89.

Fountains, and Fontenay. The church of Fountains (fig. 96)¹ was doubtless planned under the direction of Geoffrey of Ainaï, the veteran monk of Clairvaux,² and Mr. Hope suggests 1135 as the probable date of its commencement.³ Although a large church, it was laid out on a somewhat smaller scale than the contemporary Clairvaux, but both had naves of eleven bays in length, and three chapels on the east side of each arm of the transept. At Fountains, however, the planning of the transept chapels is exceptional in that the inner chapels, flanking the presbytery on either side, projected further to the east than the others.⁴ Probably we may see here a survival of the not uncommon plan of apsidal chapels *en échelon* on the east side of the transept,⁵ the rectangular termination being substituted for the apse. This exceptional treatment seems to indicate that the typical Cistercian church-plan was scarcely yet definitely established. Fontenay,⁶ which is probably the oldest surviving Cistercian church in France, is also one of the most interesting on account of its intimate connection with St. Bernard. The abbey, founded in 1119, was the second daughter of Clairvaux; its first abbot was Godfrey, St. Bernard's cousin; and its principal benefactor was Raynard of Montbard, maternal uncle of St. Bernard.⁷ The existing church, which was built at the cost of Everard, bishop of Norwich,⁸ and is said to have been begun in 1139,⁹ was consecrated in 1147 by Pope Eugenius III in the presence of Saint Bernard,¹⁰ though it is possible that it was not then finished. Its plan (fig. 96)¹¹ is an excellent example of the normal Cistercian type in its primitive simplicity, and affords an interesting parallel to the plan of Kirkstall. At Kirkstall the presbytery is longer, and each arm of the transept has three chapels, instead of the two at Fontenay; in both, however, the nave is eight bays in length, and there is a remarkable similarity in the general dimensions of the two plans,¹² although their structural system is entirely different.¹³

1. From the plan of Mr. Harold Brakspear, F.S.A., in the *Yorkshire Archaeological Journal*, xv. 402.

2. See above, p. 81, and note 5.

3. *Yorkshire Archaeological Journal*, xv. 274.

4. For Mr. Hope's suggestion in explanation of this peculiarity, see *Yorkshire Archaeological Journal*, xv. 301.

5. Represented in the plans of Saint-Vorles, Châtillon-sur-Seine (Côte-d'Or); Saint-Genès, Châteaumeillant (Cher); Saint-Sever (Landes); and in England at St. Albans, and St. Mary's, York.

6. Situated in an ideal Cistercian valley near Montbard (Côte-d'Or).

7. Vacandard, *Vie de Saint Bernard*, i. 85.

8. The architecture of the church, which is severely simple, is purely Burgundian, and owes nothing to Everard's influence.

9. J. H. Drury, in the *Proceedings of the Norfolk and Norwich Archaeological Society*, v. 41-48. Abbé J. B. Corbolin, *L'abbaye de Fontenay* (Cîteaux, 1882), 22, 26, 136.

10. *Gallia Christiana*, iv. 492. Vacandard, *Vie de Saint Bernard*, ii. 316.

11. There is a small and not quite accurate plan of Fontenay in Viollet-le-Duc, *Dict.*, i. 274 (plan of the church reproduced in Dehio and von Bezold, *op. cit.*, pl. 191). There is a better plan in E. Sharpe, *The Architecture of the Cistercians*, pl. ii. There are some notes on the abbey (with illustrations, but without a plan of the church) by A. de Caumont in the *Bulletin Monumental* for 1852, pp. 245-251. The plan of the church on fig. 96 is from my own measurements. Fontenay still awaits the monograph it deserves.

12. Compare the following dimensions:—

	Fontenay.	Kirkstall.
Nave, clear width	28 ft. 4 ins.	29 ft. 0 ins.
Nave and aisles, clear width	62 ft. 9 ins.	62 ft. 6 ins.
Length from centre of transept to inside of west wall	164 ft. 5 ins.	163 ft. 3 ins.

13. Another point of similarity between Fontenay and Kirkstall is the planning of the *cellarium* with its east wall in line with the west wall of the church, with a 'lane' between the *cellarium* and the cloister. Compare this point in the plans of Buildwas, Dore, Cîteaux and Clairvaux (fig. 96).

Of the remaining churches of the simplest type, the plans of which are illustrated in fig. 96, Buildwas¹ (Shropshire) presents much interesting material for comparison with Kirkstall. It is a smaller church, and the slightly more advanced character of its architecture indicates a slightly later date.² The still later church of Roche³ (Yorkshire) affords an early example of a modification in the construction of the transept chapels, which became general in Cistercian architecture towards the end of the twelfth century. In the earlier Cistercian churches, these chapels are always separated by solid walls. At Roche these walls no longer appear, but the chapels form a continuous aisle, divided only by low screen walls. In the contemporary church of Dore (fig. 96), the two chapels of the north transept are separated by a solid wall, while the two chapels of the south transept, which are a trifle later, are open to each other.⁴

During the golden age of the order, the Fontenay-Kirkstall plan was that followed in by far the greater number of churches, in all countries where the influence of the order penetrated. Besides those already mentioned, I will name here some of the better-known examples.⁵

In France :—Noirlac⁶ (Cher), Silvacane⁷ (Bouches-du-Rhône), Silvanès⁸ (Aveyron), La Bussière⁹ (Côte-d'Or), Clermont (Mayenne), La Ferté¹⁰ (Saône-et-Loire), Acey¹¹ (Jura), and Mont-Sainte-Marie¹² (Doubs).

In England and Wales :—Furness¹³ (Lancashire), Louth Park¹⁴ (Lincolnshire), Bindon¹⁵ (Dorset), Dore¹⁶ (Herefordshire) before its eastward extension, Valle Crucis¹⁷ (Denbighshire), and Strata Florida¹⁸ (Cardiganshire).

1. Plan in Joseph Potter, *Remains of Ancient Monastic Architecture in England* (London, 1847), pl. 1, and plan by Mr. Roland W. Paul in *The Builder*, lxxix. 292 (Oct. 6, 1900).

2. Buildwas was a foundation of the order of Savigny, but the existing church is purely Cistercian, and cannot have been begun until after the absorption of Savigny in 1147.

3. Plan in E. Sharpe, *Architectural Parallels* (London, 1848); in J. H. Aveling, *The History of Roche Abbey* (Workop, 1870), pl. 2; and in the excursion programmes of the Yorkshire Archaeological Society of July 27, 1887, and Sept. 6, 1900.

4. At Fontenay, the chapels of the transept were originally separated by solid walls. Towards the end of the twelfth century, the lower parts of these walls were removed, and segmental arches were constructed over the openings formed between the chapels. Recesses were then made in the wall and pier respectively beneath the springings of the segmental arch, for the piscina and ministerium (these are now visible in the north transept only, as the opening in the south transept has been walled up again).

5. This list is not, of course, intended to be exhaustive. It includes, for the most part, churches of which published plans are accessible.

6. E. Lefèvre-Pontalis, *L'abbaye de Noirlac*, in the volume of the *Congrès archéologique de France tenu à Bourges, 1898*, p. 223, with plan. Begun about 1170.

7. H. Revoil, *Architecture romane du Midi de la France*, ii. pl. xvii (plan). Plan also in Dehio and von Bezold, *Die Kirchliche Baukunst des Abendlandes*, pl. 118. Building in 1182.

8. *Archives de la Commission des Monuments Historiques*, v. pl. 88. A. Anglès, *L'abbaye de Silvanès* in the *Bulletin Monumental*, lxxii, 41.

9. J. Marion, *Notice sur l'abbaye de la Bussière* (1843).

10. Plan by Stürzer in *Cistercienser-Chronik*, 1895, p. 225, reproduced in A. Holtmeyer, *Cisterzienser-Kirchen Thüringens* (Jena, 1906), 44. Church said to have been begun in 1210.

11. Plan by Jules Gauthier in *L'abbaye d'Acey* (Besançon, n.d.), pl. i.

12. Plan of 1773 of the destroyed church in Canon Suchet and Jules Gauthier, *L'abbaye de Mont-Sainte-Marie et ses monuments*, in the *Bulletin de l'Académie de Besançon* (1884), pl. i.

13. W. H. St. John Hope, *The Abbey of St. Mary-in-Furness*, in the *Cumberland and Westmorland Antiquarian and Archaeological Society's Transactions*, vol. xvi.

14. E. Trollope, *The Architectural Remains of Louth Park Abbey*, in the *Associated Architectural Societies' Reports*, xii (1873), 22 and pl. 1.

15. Gordon M. Hills in the *Journal of the British Archeological Association*, xxviii. 299 and pl. 20.

16. See fig. 96.

17. Plan by Mr. Roland W. Paul in *The Builder*, lxxvii. 13 (July 1, 1899).

18. Stephen W. Williams, *The Cistercian Abbey of Strata Florida* (London, 1889), plan p. 182.

In Ireland :—Boyle¹ (Co. Roscommon).

In Switzerland :—Hauterive,² Cappel,³ and Wettingen⁴ before its eastward extension.

In Germany :—Maulbronn⁵ (Württemberg), Eberbach⁶ (Nassau), and Pforta (Thuringia)⁷ before the addition of an apse to its presbytery.

In Italy :—Fossanova,⁸ SS. Vincenzo ed Anastasio alle Tre Fontane,⁹ near Rome, S. Maria d'Arbona,¹⁰ Chiaravalle¹¹ near Milan, and Chiaravalle di Castagnola,¹² near Ancona.

In Spain :—Santas Creus¹³ (Catalonia).

In Denmark :—Sorö,¹⁴ In Sweden, Alvastra¹⁵ (Ostergötland), and Roma¹⁶ (Gottland).

We have seen that the General Chapters of the order were constantly forbidding innovations which "savoured of pride or superfluity," and passing statutes to prohibit things considered to be inconsistent with the simplicity and uniformity which were the essential characteristics of the order. Considering the strength of local building traditions in the twelfth century, it is a remarkable testimony to the discipline of the order that their church plans so generally conform to the standard type. It is, however, natural enough that some plans should show modifications of this type, due to the influence of the local manner of building. These modifications most generally consist in the substitution of the apse for the rectangular termination of either presbytery or transept chapels.

We find examples of the apsidal termination to the presbytery in France at Obasine¹⁷ (Corrèze), Fontfroide¹⁸ (Aude), Senanque¹⁹ (Vau-

1. *Transactions of the Royal Institute of British Architects*, 1862-63, p. 205 and pl. xiv.

2. J. Rudolf Rahn, *Die Mittelalterlichen Kirchen des Cistercienserordens in der Schweiz in Mittheilungen der antiquarischen Gesellschaft in Zürich*, Band xviii. Heft 2 (Zürich, 1872). Plan also in Dehio and von Bezold, *op. cit.* pl. 118 and 193, and in A. de Dion, *op. cit.* pl. F.

3. J. R. Rahn, *op. cit.*

4. J. R. Rahn, *op. cit.* Plan also in Dehio and von Bezold, *op. cit.* pl. 193.

5. E. Paulus, *Die Cisterzienser-Abtei Maulbronn* (Stuttgart, 1889), with an excellent plan. Small plan in E. Sharpe, *The Architecture of the Cistercians*, pl. ii.

6. Plan in Dehio and von Bezold, *op. cit.* pl. 194.

7. Plan in A. Holtmeyer, *Cisterzienserkirchen Thüringens*, 214, fig. 62, and 276, fig. 104; and in Dehio and von Bezold, *op. cit.* pl. 194.

8. C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 26.

9. Plan in Dehio and von Bezold, *op. cit.* pl. 192.

10. *Ibid.* pl. 192. C. Enlart, *op. cit.* 45.

11. *Ibid.* pl. 192. *Ibid.* 68.

12. *Ibid.* pl. 192. *Ibid.* 71.

13. *Album pintoresch-monumental di Catalunya: Santas Creus* (Associació Catalana d'Excursions Científiques, Barcelona, 1883), with plan. C. Enlart, *Les origines de l'architecture gothique en Espagne et en Portugal*, in the *Bulletin archéologique*, 1894.

14. J. B. Löffler, *Udsigt over Danmarks Kirkebygninger fra den tidligere Middelalder* (Copenhagen, 1883), 188 (plan).

15. Hans Hildebrand, *Sveriges Medeltid* (Stockholm 1898-1903), iii. 956 (plan). C. Enlart, *Notes archéologiques sur les abbayes cisterciennes de Scandinavie*, in the *Bulletin archéologique*, 1893 (with plan).

16. H. Hildebrand, *op. cit.* iii. 964 (with plan). The transept chapels are not square ended, but have apses of flat segmental curve.

17. Plan in Viollet-le-Duc, *Dictionnaire*, ix. 225; Dehio and von Bezold, *op. cit.* pl. 191; and A. de Dion, *op. cit.* pl. C. The presbytery, transept and its chapels, and nave are covered with pointed barrel-vaults, the aisles with unribbed groined vaults, and the crossing with a dome on pendentives. The crossing is surmounted by a fine octagonal tower (Viollet-le-Duc, *Dictionnaire*, iii. 309, figs. 21 and 22). The chapel of the north transept bears an inscription recording the dedication of an altar in 1176.

18. Plan in the volume of the *Congrès archéologique de France tenu à Carcassonne*, 1906, p. 62. Small plan in E. Sharpe, *Arch. Cist.* pl. ii.

19. Plan in Dehio and von Bezold, *op. cit.* pl. 118.

cluse), Thoronet¹ (Var), and Loc-Dieu² (Aveyron);³ in Switzerland at Bonmont⁴; in Germany at Bronnbach⁵ (Baden), and Pforta⁶ (Thuringia); in Italy at San Martino⁷ near Viterbo, and S. Maria di Falleri, near Civit  Castellana; in Spain at Las Huelgas⁸ near Burgos; and in Belgium at Villers.⁹

Apsidal terminations to the chapels of the transept are more rare. S. Maria di Falleri (Italy) has two apsidal chapels on the east side of each arm of the transept.¹⁰ Thoronet (Var), Senanque (Vaucluse), and Loccum¹¹ (Hanover) have chapels ending in apses internally, though their walls externally are straight. Fontfroide (Aude) has two chapels on the east side of each arm of the transept; the inner chapel on each side of the presbytery is square, but the outer chapel on each side terminates in a semi-octagonal apse, as does the presbytery itself.¹² Georgenthal (Gotha) seems to have had two apsidal chapels *en  chelon* to each arm of its transept.¹³

So far as our present knowledge extends, no Cistercian church in England, of the simpler type of plan, had apses either to the presbytery or to the transept chapels.

In churches of the normal plan, the number of chapels on the east side of *each* arm of the transept varied, from one at Waverley and Lysa to four at La Fert . Plans with two chapels to each arm are most numerous, but many have three.¹⁴

In the largest monasteries, the number of chapels provided in the simple type of plan which we have been considering was not sufficient for the number of monks who were priests. If, as Mr. Micklethwaite says, there was no rule that monks who were priests must celebrate daily,¹⁵ still, on the other hand, we learn from the Benedictines who

1. Plan in H. Revoil, *op. cit.* ii. pl. xiv, and in A. de Dion, *op. cit.* pl. C.

2. Plan in *Archives de la Commission des Monuments Historiques*, v. 84.

3. Also in the fourteenth-century church of the Coll ge des Bernardins, Paris, now destroyed (see Lenoir's *Statistique Monumentale de Paris*).

4. Plan in J. R. Rahn, *op. cit.*

5. Plan in Dehio and von Bezold, *op. cit.* pl. 194; in A. Holtmeyer, *op. cit.* 253, fig. 83; and in E. Sharpe, *Arch. Cist.* pl. ii.

6. Plan in Dehio and von Bezold, *op. cit.* pl. 194, and in A. Holtmeyer, *op. cit.* 276, fig. 104. Presbytery extended with polygonal apse, 1251-1300.

7. C. Enlart, *Origines fran aises de l'architecture gothique en Italie*, 57, plan, fig. 15.

8. Plan in G. E. Street, *Some Account of Gothic Architecture in Spain* (London, 1865), pl. i, and in Dehio and von Bezold, *op. cit.* pl. 192.

9. Plan by G. Boulmont, *Les ruines de l'abbaye de Villers* (Ghent, 1907). The church dates from the first half of the thirteenth century.

10. A painted inscription records the consecration of an altar in the north transept in 1186 (C. Enlart, *Origines fran aises de l'architecture gothique en Italie*, 80, n. 3).

11. Plan in Dehio and von Bezold, *op. cit.* pl. 194, and in A. Holtmeyer, *op. cit.* 258, fig. 88.

12. See note 18, p. 90 *supra*. The plan in Dehio and von Bezold, *op. cit.* pl. 118, is inaccurate, and entirely omits the outer chapels.

13. A. Holtmeyer, *op. cit.* 226, 228, 231, 241, 268 (figs. 66, 67, 69, 73, and 96). Cf. the Savignian plan of Furness, and probably Savignian plan of Vaux-de-Cernay (*supra*).

14. Of the churches mentioned above, the following have two chapels on the east side of each arm of the transept:—Fontenay, Noirlac, Silvacane, Silvan s, Clermont, Fontfroide, Senanque, Loc-Dieu, Thoronet, Buildwas, Roche, Bindon, Dore (originally), Valle Crucis, Boyle, Hauterive, Cappel, Wettingen, Bonmont, Pforta, Bronnbach, Loccum, Georgenthal, Fossanova, S. Maria d'Arbona, San Martino, S. Maria di Falleri, Santas Creus, Las Huelgas, Sor , Alvastra, and Roma. The following have three chapels on each side:—Obasine, Fountains, Kirkstall, Furness, Louth Park, Strata Florida, Maulbronn, Eberbach, Chiaravalle near Milan, and Chiaravalle di Castagnola.

15. *Yorkshire Archaeological Journal*, xv. 261. Mr. Micklethwaite gives as his authority cap. lxvi of the *Consuetudines (Ecclesiastica Official)*, in which the passage in question reads, "Sacerdotes tamen qui per septimanam cantant, si die dominico non cantant, in eorum sit potestate communicare vel non" (*Nom. Cist.* 141).

visited Clairvaux in the early part of the eighteenth century of an ancient custom which did not allow two masses to be said at the same altar on the same day.¹ If this custom obtained in the golden age of the order, it might have something to do with the tendency to increase the number of chapels, which is such a marked characteristic in the development of Cistercian church-plan; though perhaps the large numbers of monks in the more flourishing abbeys, and the consequent increase in the number of monks of one abbey who were priests, may in itself have been a sufficient reason for providing more altars. However this may be, we find an early indication of this tendency in a plan which is not only one of the oldest of which we have any knowledge, but also one of the most important—that of Clairvaux itself.

The church of Clairvaux and the greater part of the monastic buildings were unfortunately destroyed nearly a century ago.² Our knowledge of them is therefore based almost entirely on old descriptions³ and drawings, and especially on Dom Milley's drawings of 1708, one of which is an excellent plan of the whole monastery.⁴ When the rapid increase in the number of novices forced St. Bernard, much against his will in the first instance, to undertake the erection of a new monastery in 1133 or 1135⁵, the buildings were carried out with great rapidity. The church rose as if it were animated by a living soul,⁶ and was dedicated before 1145. Vacandard suggests probably in 1138.⁷ There was another dedication of the church in 1174.⁸ From a study of the plan (fig. 96). we may, I think, safely conclude that the nave and transept, as far as the east side of the transept chapels, represents St. Bernard's building begun in 1133 or 1135, and that the dedication of 1174 referred simply to the enlargement of the eastern arm, in order

1. "Nous remarquâmes encore dans Clervaux une pratique singulière; tous les religieux prêtres ont leur autel assigné pour dire la sainte Messe, et aucun ne la célèbre sur l'autel d'un autre; c'est un reste de l'ancienne discipline, qui ne permettoit pas de dire en un même jour deux messes sur un même autel." (*Voyage littéraire*, vol. i. part i. p. 186).

2. For description and illustrations of what still remains, see Canon J. T. Fowler's paper in the *Yorkshire Archaeological Journal*, xix. 1, and in xx. 1.

3. For a description of Clairvaux in 1517, see *Un grand monastère au xvi^e siècle*, in Didron's *Annales archéologiques*, iii. 223 (Paris, 1845); in 1667, see Meglinger's *Iter Cisterciense*, in Migne, *Patr. Lat.* vol. 185, col. 1598 *et seq.*; in 1708, see *Voyage littéraire*, vol. i. part i. pp. 99 and 185. See also Ph. Guignard, in Migne, *Patr. Lat.* vol. 185, col. 1661 *et seq.*, and Vacandard, *Vie de Saint Bernard*, i. 411-421, and the authorities there cited.

4. Dom Milley's three drawings, engraved by C. Lucas, were printed at Clairvaux in 1708 (see Guignard, in Migne, *Patr. Lat.* vol. 185, cols. 1763-4, for particulars of their publication). No. 1 is a ground plan of the monastery, No. 2 is a view from the west, and No. 3 is a view from the south, all with very complete references. No. 1 is reproduced in Vacandard, *Vie de Saint Bernard*, i. 419. The plans in Viollet-le-Duc, *Dictionnaire*, i. 266-7, figs. 5 and 6, in Dehio and von Bezold, *op. cit.* pl. 191 (both without scale), and in E. Sharpe, *Arch. Cist.* pl. ii (to small scale), are all based on Dom Milley's plan, as also is the block-plan illustrating Canon Fowler's paper (*Yorkshire Archaeological Journal*, xix. 16). The plan No. 1 is drawn to a scale of fathoms (*toises*) of 6 feet, and my plan of the church in fig. 96 is drawn from this plan, on the basis of 1 *toise* = 1m.949. The original plan does not show the projection of the vaults, but I have added the transverse arches, etc., in order to make the plan clearer. The difference of shading is not, of course, on the original plan, but simply represents my own inferences. The plan does not show any windows. The crosses on the plan mark the positions of altars shown on Dom Milley's plan.

5. 1135 is the date generally accepted for the beginning of the new monastery, but see Vacandard, *Vie de Saint Bernard*, i. 411, note 2, for the evidence in favour of 1133.

6. "Surrexit domus, et quasi animam viventem et motabilem haberet nuper nata ecclesia, in brevi profecit et crevit." *S. Bernardi Vita Prima*, liber ii. auctore Ernaldo, cap. v. No. 31 (Migne, *Patr. Lat.* vol. 185, col. 285).

7. *Op. cit.* i. 421, and note 3. Meglinger says that the new monastery was completed about 1148 (Migne, *Patr. Lat.* vol. 185, col. 1607).

8. *Chronicon Claravallense*, in Migne, *Patr. Lat.* vol. 185, col. 1248.

to provide a greater number of chapels.¹ In the plan (fig. 96) I have therefore shown in black those parts which I believe are to be identified with St. Bernard's building, while the presumably later work is distinguished by hatching. If we imagine the later eastern extension to be suppressed, and if we substitute what was doubtless the original form of the presbytery, aisleless and square-ended, we have a plan of the usual simple Cistercian type, but laid out on a larger scale than any other contemporary Cistercian church of which we have any knowledge. A large church was an absolute necessity for a community which numbered (including *conversi*) nearly seven hundred souls, the novices alone numbering from ninety to one hundred.² The practical considerations which controlled the planning of the church are indicated by an old note of the number of the stalls. There were 144 in the monks' choir, 33 in the choir of the infirm, 351 in the choir of the *conversi*, and 287 elsewhere, making a total of 815.³ Except in point of size, the plan of St. Bernard's church differed from Cistercian churches of the normal early type only in the number of its chapels. In addition to the three on the east side of each arm of the transept, there were two on the west side of each arm, and the planning of those on the west side of the south transept in relation to the cloister proves that the western chapels formed part of the original plan, and were not subsequent additions, as those on the west side of the north transept at Cîteaux must have been (see fig. 96). The church of Clairvaux was therefore planned, in 1133 or 1135, with ten chapels, instead of the six of Fountains and Kirkstall.

The plan (fig. 96) of La Cour-Dieu⁴ (Loiret) shows, on a smaller scale, what Clairvaux was like before its eastern extension. The thirteenth-century church of Villers (Belgium) has the same number of chapels east and west of the transept, but here forming open aisles with low screen walls dividing the chapels (as at Roche). In Italy, Casamari⁵ and San Galgano⁶ follow the same plan, but with only two

1. E. Sharpe (*Arch. Cist.* 43) attributed the whole church to the later date, but I think there can be no doubt that Vacandard's opinion (*op. cit.* i. 414), which I have followed above, is the true one. The arrangement of the buildings around the cloister proves that they were planned with the nave and transept of the church, and the *cellarium* which still survives (*Yorks. Archaeol. Journal*, xix. 3) cannot, I think, be dated later than the middle of the twelfth century. I am indebted to the Rev. Canon J. T. Fowler for prints of his photographs of the *cellarium*. It is interesting to note that the treatment of the external face of the walls of the *cellarium* at Clairvaux with a series of blind arcades is reproduced in the *cellarium* at Kirkstall.

2. Vacandard *Vie de Saint Bernard*, ii. 392.

3. Migne, *Patr. Lat.* vol. 185, col. 1775. Similar numbers are given in some of the descriptions cited above (p. 92, note 3). When the Benedictines visited Clairvaux in 1708, they noted that most of the stalls of the *conversi*, which were in three rows on each side of the nave, had been removed a few years before, leaving only a few at the west end which are shown on Dom. Milley's plan (*Voyage littéraire*, vol. i, part i, p. 99). At Cluny, there were 220 stalls in the monks' choir (*Ibid.* p. 228).

4. Plan from A. de Dion, *op. cit.* pl. D, reproduced, with the projections of the vaults added, from the plan in L. Jarry, *Histoire de l'abbaye de La Cour-Dieu* (Orléans, 1864). The church was begun in 1170, five altars were consecrated in 1182, and three others before 1198; and at the dedication of the church in 1216 seven other altars were consecrated.

5. C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 27, 40, and plan, fig. 2.

6. A. Canestrelli, *L'Abbazia di S. Galgano* (Florence, 1896), 82, plan, fig. 21. See also C. Enlart, *op. cit.* 48.

eastern chapels, and one western, to each arm of the transept. San Martino, near Viterbo, has one western chapel to the south transept only.

A further development of the chapel plan is to be seen at Pontigny (Yonne), the only church of the five principal houses of the order which has survived. This stately church, which is the more interesting to us because it is contemporary with Kirkstall, was begun about 1150, and is quite complete with the exception of the pair of inner chapels flanking the presbytery, and the presbytery itself, which disappeared in the great eastward extension of the end of the twelfth century. In the plan (fig. 96),¹ I have shewn the earlier building in black, while the later extension is distinguished by hatching. It is certain that the earlier presbytery was aisleless,² and there can be no doubt that it was of the normal square-ended type. Each arm of the transept had three rectangular chapels on its eastern side, and two on its western side—so far the plan is precisely that of Clairvaux³—but Pontigny has in addition two rectangular chapels against the gable ends of the transept.⁴ Pontigny therefore had fourteen chapels, against the ten of Clairvaux and La Cour-Dieu. Chapels at the ends of the transept occur also at Chiaravalle della Colomba⁵ (Italy). Ourscamp⁶ (Oise) had two rectangular chapels at the end of the north transept, besides four on its eastern side, and three on the east side of the south transept.

This development of the transept-chapel plan did not, however, provide a sufficient number of altars in the larger churches. The simple aisleless presbytery of the earlier plans gave way, therefore, to a presbytery surrounded by an ambulatory which gave access to further chapels. The ambulatory plan had hitherto been rejected by the Cistercians, but when chapels were planned to the east of the presbytery, the ambulatory became a necessity, to provide not only access to the chapels, but also a passage-way for processions. The ambulatory plan of the Cistercians was, however, usually contrived in

1. There are plans in Henry, *Histoire de l'abbaye de Pontigny* (Auxerre, 1839), and in Chaillou des Barres, *L'abbaye de Pontigny* (Paris, 1844). From the latter work are taken the plans in Viollet-le-Duc, *Dictionnaire*, i. 272, and Dehio and von Bezold, *op. cit.* pl. 191. The plan in fig. 96 is copied from the excellent plan of the church by M. André Philippe in the *Guide du Congrès d'Avallon en 1907* (*Société française d'archéologie*), p. 196. I have to thank M. Philippe for very kindly lending me his original plan. I am responsible for the two shadings on the reproduction in fig. 96.

2. Dehio and von Bezold (*op. cit.* i. 528, 531) and, following them, A. Holtmeyer (*Cisterzienserkirchen Thüringens*, 48) think that the church begun about 1150 had the rectangular ambulatory plan of Cîteaux. This is certainly a mistake. In the south wall of what is now the south aisle of the presbytery, near its western end, the presence of a double piscina and ambry in a precisely similar position to those in the adjoining chapels of the transept proves that this western end of the south aisle was originally a chapel like the others.

3. At Pontigny the chapels on the west side of the transept communicate by doorways at the west end of their side walls. Dom Milley's plan of Clairvaux shows precisely the same arrangement.

4. The chapel in the south-west angle of the south transept, now much altered by 'restoration,' was a later addition. It was dedicated to St. Thomas of Canterbury, who took refuge at Pontigny during his quarrel with Henry II.

5. C. Enlart, *Origines françaises de l'architecture gothique en Italie*, 70.

6. Restored plan by M. Eugène Lefèvre-Pontalis in the volume of the *Congrès archéologique de France tenu à Beauvais*, 1905, p. 166. Church begun about the middle of the twelfth century.

characteristically simple fashion, in one of two ways, (1) with a rectangular ambulatory, and (2) with an apsidal ambulatory. We will consider these in turn.

Of the rectangular ambulatory plan we find two varieties, (a) with a row of eastern chapels only, and (b) with chapels surrounding the ambulatory on three sides. To the first of these two classes belong the known English examples,¹ plans of two of which, Byland and Dore, are given in fig. 96.

Byland² (Yorkshire), one of the largest English Cistercian churches, was a completely new church erected on a new site during the last thirty years of the twelfth century. Like Clairvaux, it has chapels (here open aisles) on both sides of the transept. The rectangular presbytery, of three bays, has north and south aisles, returned across the east gable, where the eastern 'aisle' formed five chapels. The eastern ambulatory, or procession path, was therefore *within* the east gable of the presbytery, the high altar being placed one bay westward of the east gable. The thirteenth-century rebuilding of Waverley³ (Surrey) had five eastern chapels planned in the same manner, with the ambulatory within the east gable: the presbytery was five bays in length, and each arm of the transept had three chapels on its east side, instead of two as at Byland.

The eastern part of Dore⁴ (Herefordshire) is an extension of the beginning of the thirteenth century, of an earlier church of the normal type. Like Byland, it has five eastern chapels, but here the returned eastern 'aisle' is of two bays in depth, thus providing an ambulatory in front of the chapels, but external to the east gable of the presbytery.⁵ The north and south aisles of the presbytery, and the eastern ambulatory and its chapels, are covered with continuous lean-to roofs, a method which continues the Cistercian tradition of simplicity of construction. The plan of a Cistercian church sketched in the *Album of Villard de Honnecourt*⁶ is of the same type as Dore, with four eastern chapels and ambulatory; its transept plan is the same as Byland; indeed, if we substitute an ambulatory for the easternmost

1. The rectangular ambulatory plan was no novelty in England when the Cistercians adopted it, for it is found in the Benedictine nunnery-church of Romsey (Hampshire), in the first quarter of the twelfth century.

2. Plan in E. Sharpe, *Architectural Parallels*, and by Mr. Roland W. Paul in *The Builder*, lxxi, 270 (Oct. 3, 1896), with description by Mr. W. H. St. John Hope. See also E. Sharpe, *Arch. Cist.* pl. ii and p. 53. Mr. Sharpe suggests 1170 as the probable date of the commencement of the church.

3. Harold Brakspear, *Waverley Abbey*, 24; plan, p. 22, and large plan at end. The church was begun in 1203.

4. Plan and description by Mr. Roland W. Paul in the *Transactions of the Bristol and Gloucestershire Archaeological Society*, xxvii, 117-126; in *The Builder*, lxx, 298 (April 4, 1896); and in Roland W. Paul, *Dore Abbey, Herefordshire* (1898). The later extension is distinguished by hatching in the plan in my fig. 96.

5. Mr. Harold Brakspear has shown that the church of Hayles (Gloucestershire), built after the foundation of the abbey in 1246, had the same plan of eastern ambulatory and chapels (*Archæological Journal*, lviii, 350, with plan).

6. *Album de Villard de Honnecourt, architecte du xiii^e siècle*, reproductions in facsimile (Bibliothèque Nationale, Département des Manuscrits, Paris, 1907), pl. xxviii. The legend below the sketch reads: *Vest une glise d'esquarie, ki fu esgardée a faire en l'ordene de Cistiaus*. Also in Dehio and von Bezold, *op. cit.* pl. 191.

bay of the presbytery of Byland, the two plans would be precisely the same, except that Villard's plan has only four eastern chapels instead of five.

The rectangular ambulatory plan reaches its most complete development in the plan of Cîteaux¹ (fig. 96), which represents the church consecrated in 1193.² Was this a completely new church, or was it simply a question of an eastward extension of an earlier church of the normal type, as at Clairvaux and Pontigny? It is certain that the small church of 1106 cannot have sufficed for the mother-house of the order until 1193, and we must conclude that it was superseded by a larger church, probably during the second quarter of the century. It is possible, and even probable, that the plan as we have it represents such a church, with its eastern part rebuilt and extended immediately before the consecration of 1193, but no definite evidence seems to be available,³ and the church itself, after undergoing much alteration in the eighteenth century, has been completely destroyed. The planning of the south transept in relation to the cloister proves that, whenever the church was built, it was not intended to have chapels on the west side of the transept, and that the chapels on the west side of the north transept are an addition, or at any rate an afterthought. The manner in which the ambulatory chapels join the transept chapels rather suggests two different dates. However, what is more material for our present purpose is the certainty that the date given by the consecration of 1193 applies to the plan of the presbytery and its ambulatory and chapels. The ambulatory is surrounded by chapels on its north, south and east sides, and the total number of chapels provided, including those of the transept, is twenty-one.⁴ Whether Cîteaux was

1. The plan on fig. 96 is drawn from a plan of the abbey, entitled *Plan Geomtral de Cîteaux*, signed by Étienne Prinstet, and dated 1718, which forms one of a series of drawings of Cîteaux on parchment, now preserved in the *Archives départementales de la Côte-d'Or*, at Dijon. The original plan has two scales, *toises de 6 pieds* and *toises de 7 pieds et demy*. My plan of the church is drawn from the former scale, on the basis of 1 *toise* = 100.949. The original plan does not show the projection of the vaults, but I have added the transverse arches, etc., in order to make the plan easier to read. The plan does not show any windows. The crosses on my plan show the positions of altars marked on the original plan. Étienne Prinstet's plan shows various *projets* for alterations, which are distinguished by a yellow tint; their nature is indicated by references on each side of the drawing. One of these *projets* was a large sacristy, abutting against the east wall of the chapels on the east side of the south transept, and intercepting two of the chapels on the south side of the south ambulatory of the presbytery. This proposed sacristy, however, was never built, as is proved by an engraving entitled *Plan des Bâtimens de Cîteaux commencé en 1760*, by Lenoir le Romain, a copy of which is in the Bibliothèque Nationale (Estampes), Paris. The latter plan, which is without scale, shows the northern and southern chapels of the ambulatory as complete, though the eastern chapels are superseded by a new east end, and the nave is shown as shortened by the destruction of its three western bays; this plan distinguishes old and new buildings by different hatchings. I have to thank Mr. J. Willis Clark, of Cambridge, for very kindly lending me a photograph of Étienne Prinstet's plan. I owe especial thanks also to M. le Vicomte Pierre de Truchis, who not only made for me a tracing of the plan of the church from the original drawing, but also most kindly made an enlargement of it to a metric scale. M. de Truchis has also most obligingly placed at my disposal his intimate knowledge of Burgundian architecture.

2. Guignard, *Les Monuments primitifs*, xxv. lvi.

3. A. Holtmeyer (*Cisterzienserkirchen Thüringens*, 37) speaks of the consecration of the church of Cîteaux by Pope Eugenius III in 1148. I think that this is a mistake, for what the Pope consecrated was a cemetery, and there is no question of a church in the record quoted by Guignard (*Les Monuments primitifs*, lviii and 75). Vacandard (*l'ie de Saint Bernard*, ii, 315 and note 4) corrects the date to 1147.

4. For descriptions of Cîteaux, see Meglinger's *Iter Cisterciense* of 1667, in Migne, *Patr. Lat.* vol. 185, col. 1593 *et seq.*, and *l'oyage littéraire*, vol. i, part i. 198-224. For views of the monastery, see the engraving by P. Brissart, 1674, a south view, with full references; and the engraving by B. Fariat, also a south view (second half of 18th century), both in the Bibliothèque Nationale (Estampes), Paris. The sketch in Viollet-le-Duc, *Dictionnaire*, i. 271, fig. 7, is apparently from Brissart's engraving, and both show the nave of seven bays, instead of nine. Fariat's engraving shows the nave of nine bays.

the prototype of the rectangular ambulatory plans of the Cistercians is doubtful. Unless its eastern part was a very long time in hand before the consecration of 1193, it cannot have been the prototype of Byland. Cîteaux, however, was no doubt the prototype of the Cistercian plans with chapels on the three sides of the ambulatory, of which some monasteries in Germany afford examples.

The plan of Ebrach (Bavaria) reproduced in fig. 96¹ is evidently a copy of that of Cîteaux, but whatever may have been the case at Cîteaux, Ebrach was an entirely new church, begun in 1200, finished in 1282, and consecrated in 1285.² The arrangement of the presbytery and its ambulatory and chapels is precisely that of Cîteaux, but Ebrach has only two chapels on the east side of each arm of the transept, and no western chapels. There are therefore sixteen chapels in all.³ The plan of the eastern part of the church of Riddagshausen⁴ (Brunswick) is practically the same, but there are no chapels to the transept. The thirteenth-century extension of the church of Georgenthal⁵ (Gotha) shows twelve chapels arranged around the three sides of a rectangular ambulatory in similar fashion.⁶

A point in the treatment of the elevation of these ambulatory plans is worth attention. At Byland and Dore a single lean-to roof was continued around the three sides of the presbytery, and the elevation was thus of two stories only. At Cîteaux,⁷ Ebrach,⁸ and Riddagshausen,⁹ the elevation is of three stories; the chapels are covered by a lean-to roof, above which rises the wall of the ambulatory, containing a range of clearstory windows, and above this again is the lean-to roof of the ambulatory itself, under the high windows of the presbytery. These continuous lean-to roofs, hipped at the angles, cannot be considered satisfactory in appearance, though they certainly conform to the Cistercian standard of simplicity.

The plan of the presbytery and 'nine altars' of Fountains,¹⁰ as built in the first half of the thirteenth century, must be connected with the rectangular ambulatory plan, but the extension is designed on very

1. From the plan in Dr. Joannes Jaeger, *Die Klosterkirche zu Ebrach* (Würzburg, 1903), p. 45. Plan (pl. ii) and view of east end (pl. vi) in E. Sharpe, *Arch. Cist.*, and plan of church to larger scale, views, and details in E. Sharpe, *The Ornamentation of the Transitional Period in Germany* (London, 1876), pl. i-viii.

2. The altars in the chapels of the north transept were consecrated in 1211 and 1218.

3. The altars shown on Dr. Jaeger's plan are marked by crosses on the plan in fig. 96. The church had 23 altars in the fourteenth century. St. Michael's chapel, at the end of the north transept, was begun with the church, as a burial-chapel for benefactors of the Imperial family, and was consecrated in 1207. Cf. the chapel in a corresponding position in the plan of Clairvaux.

4. E. Sharpe, *Arch. Cist.* plan, pl. ii; external and internal views, pls. vii and viii. Plan also in Dehio and von Bezold, *op. cit.* pl. 195; A. Holtmeyer, *op. cit.* fig. 93, p. 264; and J. Jaeger, *op. cit.* fig. 26, p. 46. See also Dr. R. Dohme, *Die Kirchen des Cistercienserordens in Deutschland* (Leipzig, 1869), pp. 102-3.

5. Plan in A. Holtmeyer, *op. cit.* fig. 96, p. 268.

6. Cf. also the plans of Arnsburg (Hesse) and Lilienfeld (Lower Austria) in Dehio and von Bezold, *op. cit.* pl. 195; and the plan of Vitskøl (Denmark) in J. B. Löffler, *Ruinerne af Vitskøl Klosterkirke* (Copenhagen, 1900), pl. 1. The latter plan has a rectangular ambulatory with recessed apses forming chapels on its three sides.

7. Shown in Brissart's and Fariat's engravings, and in Viollet-le-Duc's drawing.

8. J. Jaeger, *op. cit.* figs. 36, 37, 39.

9. E. Sharpe, and R. Dohme, *op. cit.*

10. Shown by dotted lines on the plan in fig. 96.

original lines, and bears but little resemblance to the plans already noticed. The nine chapels are placed in a great eastern transept rising to the full height of the church—a design of much more ambitious architectural character, and less consonant with Cistercian simplicity than those of the Cîteaux type. Of Fountains we are expressly told that the reason of the extension was that the number of the monks had so increased that the choir was not large enough to contain them, and there were too few altars for them to celebrate at.¹

On the apsidal ambulatory plan, the earliest example is the extension of Clairvaux (fig. 96) consecrated in 1174. The eastern bay of the (presumably) rectangular presbytery of St. Bernard's church was converted into an apse, without any extension of its length; the east walls of the inner chapel on each side were removed, and around the apse was constructed an ambulatory, to give access to the nine chapels which surrounded it.² This plan, although its motive was of course the same as that of the contemporary *chevet* plan of the great French cathedrals, was essentially different in that the chapels, instead of being separate with separate roofs, were included within one continuous wall and formed a continuous range under a single lean-to roof. In fact, it was simply the application to the apsidal form of the same simple methods of plan and construction which we have already noticed in the transept chapels of the earlier Cistercian churches. At Clairvaux, the elevation was of three stories, with separate lean-to roofs over the chapels and ambulatory, and with a clearstory to the ambulatory³—an arrangement adopted later at Cîteaux and the churches copied from it.

We have seen how the church of Pontigny, begun c. 1150, followed with some expansion the plan of St. Bernard's Clairvaux begun in 1133 or 1135. So also, in its eastward extension of c. 1180-1200, Pontigny followed the ambulatory plan of Clairvaux of 1174, but in more ambitious fashion (fig. 96). This beautiful work has a presbytery of three straight bays and an apse, surrounded by an ambulatory and eleven chapels, two on each side of the straight part, and seven around the apse. These latter, instead of being divided simply by straight walls, as at Clairvaux, assume a polygonal form internally. The chapels and ambulatory are each covered with lean-to roofs, but only a narrow strip of walling shows between them, and there is no clearstory to the ambulatory. Pontigny, as completed by this extension, had twenty-three chapels, as against seventeen at Clairvaux.⁴

1. *Memorials of Fountains*, i. 128, and W. H. St. John Hope, *Fountains Abbey*, in the *Yorkshire Archaeological Journal*, xv. 277.

2. Dom Milley's plan shows altars in eight of these chapels, but the first chapel on the south side had been converted into a passage to the little cloister.

3. This cannot be seen in Dom Milley's south view, but it is distinctly shown in Israel Silvestre's engraving, *Vue de L'Eglise de l'Abbaye de Clairvaux en Bourgogne* (Bibliothèque Nationale, Estampes).

4. Not counting the chapel to the north-east of the north transept, or the additional chapel to the north-west of this transept. The description of Clairvaux in 1517 says that there were thirty altars in the church (*Annales archéologiques*, iii. 227).

The apsidal ambulatory plan of Clairvaux was followed, in France, at Savigny¹ (Manche), Breuil-Benoit² (Eure), Bonport³ (Eure), and Cherlieu⁴ (Haute-Saône); in England, at Beaulieu⁵ (Hampshire); in Sweden, at Varnhem⁶ (Vestergötland); and in Portugal, at Alcobaça.⁷ In Germany, Heisterbach⁸ (Rhenish Prussia) has a very similar plan, but here the ambulatory is surrounded by nine chapels in apsidal recesses in the outer wall, which is semicircular externally.⁹ Chaalis¹⁰ (Oise), which has an aisleless apsidal presbytery, is an exceptional example of the application of the Clairvaux plan to the transept ends, without an ambulatory, since the transept itself served that purpose. Quincy (Yonne) seems to have had a similar plan.¹¹

The churches of the Cistercian order frequently had a narthex at the west end of the nave, in conformity with Burgundian traditions. In the plans illustrated in fig. 96, the narthex existed at Fontenay, Fountains, Byland, Cîteaux, Clairvaux, and Pontigny. There was no western narthex at Kirkstall.

Many of the later Cistercian churches do not present the specially Cistercian characteristics described above, but their plans conform to the types usual in the larger churches of their time and country. The ordinary English plan of an eastern arm with a high east gable, and with north and south aisles,¹² was adopted by the Cistercians at Jervaulx¹³ (Yorkshire) in the last quarter of the twelfth century, and was followed at Rievaulx¹⁴ (Yorkshire), Tintern¹⁵ (Monmouthshire), and Netley¹⁶

1. Plan in A. de Dion, *op. cit.* pl. A. The church, built between 1175 and 1200, had nine chapels around the ambulatory, making, with the four transept chapels, a total of thirteen.

2. Plan in A. de Dion, *op. cit.* pl. B, and in E. Chevallier (work cited in following note), p. 105. The church, begun probably c. 1190, and consecrated in 1224, has five chapels around the ambulatory.

3. Abbé Émile Chevallier, *Notre-Dame de Bonport* (Mesnil-sur-l'Estrée, 1904), plan, fig. 1. The church, which was built c. 1200-1225, has seven chapels around the ambulatory.

4. Abbé Châtelet, *Les monuments de l'abbaye de Cherlieu* (Besançon, 1885). Seven chapels around the ambulatory.

5. W. H. St. John Hope and Harold Brakspear, *The Cistercian Abbey of Beaulieu*, in the *Archæological Journal*, lxiii. 130, with plan by Mr. Brakspear.

6. H. Hildebrand, *Sveriges Medeltid*, iii. 960.

7. Plan in W. Crum Watson, *Portuguese Architecture* (London, 1908), 58.

8. Plan in R. Dohme, *op. cit.* p. 116, and in Dehio and von Bezold, *op. cit.* pl. 195.

9. Cf. the very similar plan of the Premonstratensian church of Donmartin (Pas-de-Calais), in C. Enlart, *Monuments religieux de l'architecture romane et de transition dans la région picarde* (Amiens and Paris, 1895), fig. 71, p. 107.

10. E. Lefèvre-Pontalis, *L'église abbatiale de Chaalis*, in the *Bulletin monumental* (1902), lxvi. 419; plan, p. 456. Church commenced before 1202, and consecrated in 1219. The plan shows a nave of twelve bays in length, as at Byland.

11. *Voyage littéraire*, vol. i. part i. p. 107.

12. This plan is not, as is often supposed, of exclusively English origin, for it is the plan of Saint-Hilvevert, Gournay (Seine-Inférieure), of the beginning of the twelfth century, if not of the end of the eleventh. See L. Régnier in the volume of the *Congrès archéologique de France tenu à Beauvais en 1905*, p. 74, with plan.

13. Plan in E. Sharpe, *Architectural Parallels*, and *Arch. Cist.* pl. ii. Plan by W. H. St. John Hope in the Yorkshire Archæological Society's Excursion programme of July 29, 1891.

14. Plan in E. Sharpe, *Architectural Parallels*, and *Arch. Cist.* pl. ii, and in *The Builder*, lxxvii. 10 (July 7, 1894).

15. Plan in E. Sharpe, *Architectural Parallels*, and *Arch. Cist.* pl. ii; plan by Mr. Roland W. Paul in *The Builder*, lxxv. 9 (July 2, 1898), and in the *Archæological Journal*, lxi. 213.

16. Plan in E. Sharpe, *Architectural Parallels*, and *Arch. Cist.* pl. ii, and by Mr. Roland W. Paul in *The Builder*, lxxviii. 262 (April 6, 1895).

(Hampshire) in the thirteenth century. The ordinary French *chevet* plan, with apse and ambulatory, surrounded by separate apsidal chapels, was adopted in France in the church of Longpont (Aisne), consecrated in 1227, and in the rebuilding of Ourscamp¹ (Oise) in the last quarter of the thirteenth century; in England, at Croxden² (Staffordshire), and in the extension of 1270-7 at Hayles³ (Gloucestershire); in Germany, at Altenberg⁴ (Rhenish Prussia); and in Spain at Morerucla,⁵ Veruela,⁶ and Poblet.⁷ These examples show that, even as early as the end of the twelfth century, and still more in the thirteenth century, the uniformity of Cistercian church-plan, which had so strikingly expressed the uniformity of observance inculcated by the founders of the order, was giving way to conformity with the architectural standards of the time.

In later times, chapels were formed to provide additional altars in parts of the church which had not been designed for this use. At Cîteaux, in the seventeenth century, there were thirty altars in the church.⁸ although this number is considerably in excess of the number of chapels structurally designed as such, and we learn from a later description that there were altars against all the pillars of the nave.⁹ So also at Fountains¹⁰ and Kirkstall¹¹ there were altars against some of the nave pillars,¹² and chapels were also formed in the nave aisles, which were originally designed to be simple passage-ways. Such arrangements are, however, usually of comparatively late date, and have no real connexion with the architecture of the buildings.

My readers may possibly think that I have taken them a long way from Kirkstall, but my object in attempting this analysis of Cistercian church plan has been to show how the simple standard plan, of which Kirkstall is such an excellent example, controlled the church architecture of the Cistercians wherever the order spread, and how it was the root-idea of all subsequent development so long as Cistercian characteristics continued to differentiate the architecture of their churches from that of the other great churches of the time.

1. E. Lefèvre-Pontalis in the volume of the *Congrès archéologique de France tenu à Beauvais en 1905*, p. 167, with plan.

2. Plan in E. Sharpe, *Arch. Cist.* pl. ii, and in Gordon M. Hills, *Croxden Abbey and its chronicles*, in the *Journal of the British Archaeological Association*, xxi. 294, and pl. 14.

3. Plan by Mr. Harold Brakspear in the *Archæological Journal*, lviii. 356.

4. Plan in E. Sharpe, *Arch. Cist.* pl. ii.

5. Plan in *Boletín de la Sociedad Española de Excursiones* (1906), p. 100. The ambulatory at Morerucla has a clearstory.

6. Plan in G. E. Street, *op. cit.* pl. xxiii; in Dehio and von Bezold, *op. cit.* pl. 192; and in E. Sharpe, *Arch. Cist.* pl. ii.

7. Plan in *Album de Poblet (Associació Catalanista d'Excursions Científicas)*.

8. Meglinger's *Iter Cisterciense*, in Migne, *Patr. Lat.* vol. 185, col. 1593.

9. *Voyage littéraire*, vol. i, part i, p. 198.

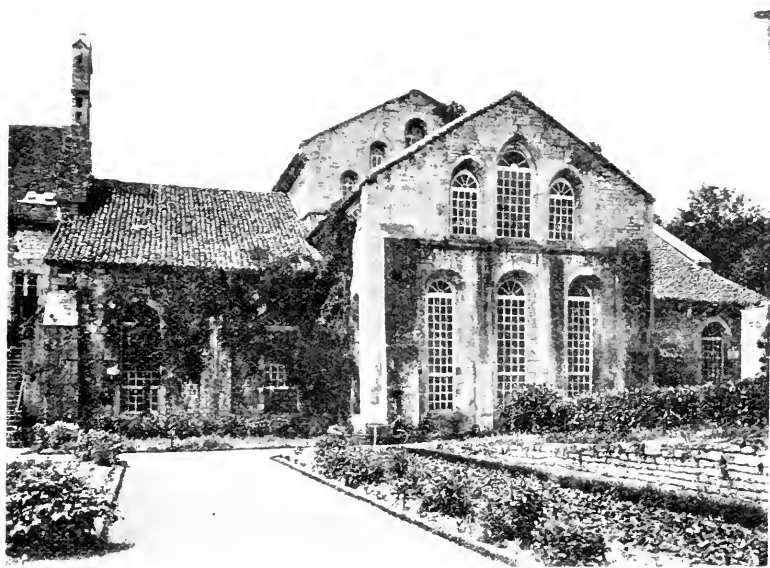
10. See Mr. Brakspear's plan, and Mr. Hope's description, *Yorkshire Archaeological Journal*, xv. 306.

11. See coloured plan, and Mr. Hope's description, p. 21 *supra*.

12. The plan of Ebrach shows altars against all the pillars of the nave except the westernmost pair (see crosses on plan in fig. 96).

GENERAL DESIGN AND STRUCTURE.

In endeavouring to ascertain what the general design of the church of Kirkstall owes to Cistercian influence, and how far it simply follows the Anglo-Norman manner of its time, we must know what characteristics were specially Cistercian in the churches of the order built during the second quarter of the twelfth century. Our knowledge on this subject would have been much more complete if the church at Clairvaux, begun by St. Bernard in 1133 or 1135, had not been entirely destroyed. What little we can now know of its architecture must be gathered from Dom Milley's plan, and from his and other general views. Of the Cistercian churches in Burgundy which have survived,



Photographed by Ph. des Forêts.

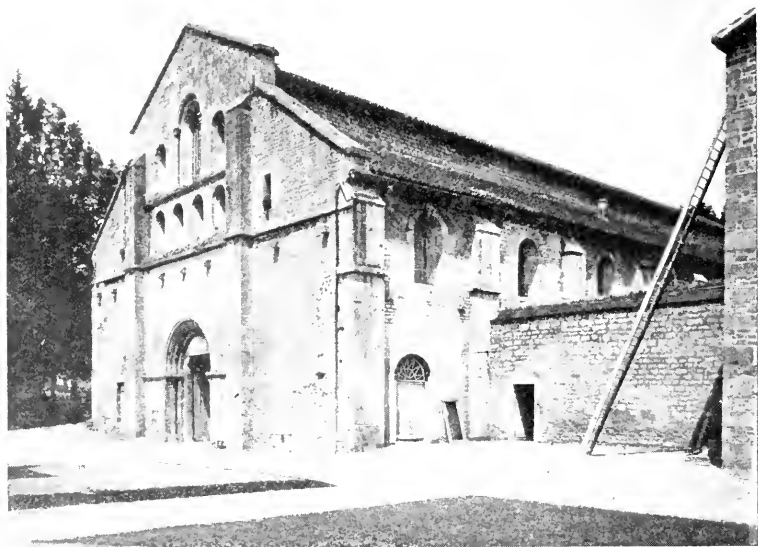
Fig. 57. Fontenay, east end of church.

the most valuable for the purpose of comparison are Fontenay (figs. 57, 58, and 59), begun c. 1139, and probably nearly finished at the time that Kirkstall was commenced, and Pontigny, begun c. 1150. Of the English Cistercian churches, that of the mother-house of Fountains,¹ of which the transept and nave have survived, affords the best material for comparison, for, although filiation did not necessarily involve architectural connexion, Kirkstall was too near to Fountains not to be powerfully influenced by it in its architecture. The great church of Fountains was begun some years before the settlement at Kirkstall,

1. Fountains is very completely illustrated in *A Monograph on the Abbey of S. Mary of Fountains*, by J. Arthur Reeve (London, 1892).

but its nave cannot, I think, have been finished when the nave of Kirkstall was commenced. Buildwas,¹ which from its slightly more advanced architectural character must have been begun a little later than Kirkstall, is useful for comparison in the other direction, though it is a smaller church than Kirkstall, and of less proportionate height.

The most important factor in the design of a mediaeval church is the method employed for covering the various spans—the ceiling or vault. The Romanesque school of Burgundy, which produced so many remarkable and original churches, was one of the first to succeed in covering them with stone vaults. It employed various systems



Photographed by Ph. des Forts.

Fig. 58. Fontenay, west end of church.

simultaneously, one of which is adopted by the Cistercians at Fontenay (fig. 59). In spite of the great similarity between the plans of Fontenay and Kirkstall, their structural system is very different; nevertheless, certain features of the Burgundian system represented by Fontenay were imported by the Cistercians to Fountains and Kirkstall. The church at Fontenay is entirely covered with pointed barrel vaults. Of these the vault of the nave is at the highest level, and is continued through to the east side of the transept, without any real crossing, so far as the vaults are concerned. The vaults of the presbytery² and transept arms are at a lower level, and the arches into the latter rise

1. Buildwas is illustrated in full detail in *Remains of Ancient Monastic Architecture in England*, by Joseph Potter (London, 1847).

2. Five windows, stepped above the presbytery roof, open into the east end of the nave under its vault.

only slightly above the impost of the nave vault. The transept chapels are each covered with a barrel vault, at right angles to the vault of the transept itself. The aisles of the nave are similarly covered with



Photographed by Ph. des Forêts.

Fig. 59. Fontenay, interior of church from south-west.

transverse barrel vaults, on pointed arches across the aisles, the aisle vaults thus acting as abutments to the vault of the nave itself.¹ The Cistercians adopted this system of transverse barrel vaults covering

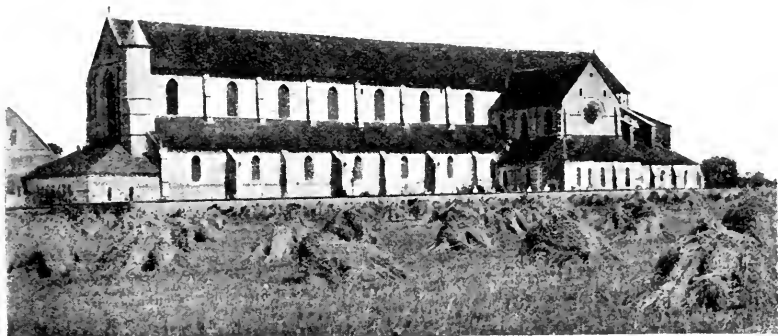
1. Viollet-le-Duc, *Dictionnaire*, i. 179, fig. 14. See also, for other examples, C. Enlart, *Manuel d'archéologie française* (Paris, 1902), i. 271-2, note 2, and fig. 104 (Châtillon-sur-Seine); and *Histoire de l'Art*, ed. by André Michel (Paris, 1905), i. 475-6, and fig. 236.

the aisles abutting a longitudinal barrel vault over the nave in many of their churches, e.g. Bonmont¹ and Hauterive² in Switzerland, and they carried it as far north as Alvastra in Sweden, and as far south as Girgenti³ in Sicily. They imported it, in part, to Fountains, where the aisles of the nave are covered with pointed transverse barrel vaults,⁴ as at Fontenay, but here the transverse arches are semicircular, and the details are Anglo-Norman. The necessity of securing clearstory lighting, however, prevented the adoption of the complete system at Fountains, and the longitudinal barrel vault over the nave, of which the transverse barrels were the logical accompaniment, was apparently not even contemplated, and certainly never constructed. The pointed barrel vaults over the transept chapels at Fountains, repeated later at Kirkstall, belong to the same system, and must be regarded as an importation from Burgundy.

The barrel vault, as a means of covering the principal spans of clearstoried churches was however entirely alien to the ideas of the Anglo-Norman builders. Unless it were kept low down, the difficulties of abutment were serious, and, if it were kept low, high lighting was impossible. The problem—how to vault the main spans so as to surmount these difficulties—which was *the* problem of Romanesque times, could only be successfully solved with the groined vault, and the builders of the Anglo-Norman school never attempted to solve it in any other way. So long as the simple groined vault alone was at their disposal, they generally vaulted only the aisles, and the comparatively short eastern arms of their churches, where the difficulties of abutment were much less serious than in the long naves.⁵ Even after the introduction of the groin-rib had made the complete solution of the problem possible, the main spans of nave and transept were still covered with wood ceilings, very frequently in England, though perhaps less frequently in Normandy. It is therefore quite in accordance with the English tendencies of the time that, at Kirkstall, only the presbytery, the transept chapels, and the aisles of the nave should be vaulted, while the transept and nave were covered with wood ceilings, as also were the transept and nave at Fountains and Buildwas.⁶ Of the system of the vaults of the presbytery and aisles of the nave at Kirkstall, I shall have more to say presently.

1. J. R. Rahn, *op. cit.* p. 79, fig. 3 (sectional view). Dehio and von Bezold, *op. cit.* pl. 99, 6 (section).
 2. J. R. Rahn, *op. cit.* p. 74, fig. 2 (section through transept). Dehio and von Bezold, *op. cit.* pl. 99, 4 (section of nave). A. de Dion, *op. cit.* pl. G (internal view).
 3. C. Enlart, *Origines françaises de l'architecture gothique en Italie*, p. 74 and figs. 22 and 23.
 4. *Yorkshire Archaeological Journal*, xv, 289, fig. 4.
 5. They were more cautious than the Burgundian builders at Vézelay, for example, where the nave was covered with groined vaults early in the twelfth century.
 6. The presbytery and transept chapels at Buildwas are covered with quadripartite ribbed vaults, but the aisles of the nave were only wood-ceiled.

In some of the earlier Cistercian churches, the four arms of the cross were not carried up to the same height. At Fontenay, the walls of the transept and presbytery rise only to the same height as those of the aisles of the nave, and the ridges of the roofs of the former do not rise above the eaves of the nave roof. At Noirlac¹, and also at Fontfroide, the presbytery is much lower than the transept and nave. Even in the great church of Pontigny (fig. 60), the transept is lower than the nave, the eaves of the transept roof springing at about mid-height of the nave clearstory. As a rule, too, Cistercian ideas of simplicity did not admit of the crossing showing above the roofs. Clairvaux, Cîteaux, Pontigny,² and many other churches only had a wooden *flèche* over the crossing. Dispositions of this kind were not, however, in harmony with the practice of the builders of the greater churches in England in



Photographed by J. V. Saunders.

Fig. 60. Pontigny, south side of church.

the twelfth century. Consequently we find, at Fountains, Kirkstall, and Buildwas, for example, that the English Cistercian builders, following the manner of their time, carried up all the four arms of the cross to the same height, and built a tower over the crossing. Stone towers were indeed altogether prohibited by the General Chapter of 1157,³ but this statute was frequently disregarded.⁴ In England, however, the towers were only very low, and at Kirkstall,⁵ as at Buildwas, the windows were placed near the angles of the tower on each side of the abutting roofs, so that the top of the tower rose but little above the ridges.

1. There is a window in the east wall of the crossing, opening above the roof of the presbytery, like the five windows in the similar position at Fontenay. See E. Lefèvre Pontalis, *op. cit.* section of transept.

2. This is shown in the views of Clairvaux and Cîteaux mentioned above. The *flèche* at Pontigny was destroyed in 1793 (Henry, *op. cit.* p. 49).

3. See p. 78 and note 9 *supra*.

4. E.g. the fine central tower of Obazine (Viollet-le-Duc, *Dictionnaire*, iii. 310, figs. 21 and 22), and the similar tower of Fossanova (C. Enlart, *Origines*, p. 34, pl. I and fig. 3).

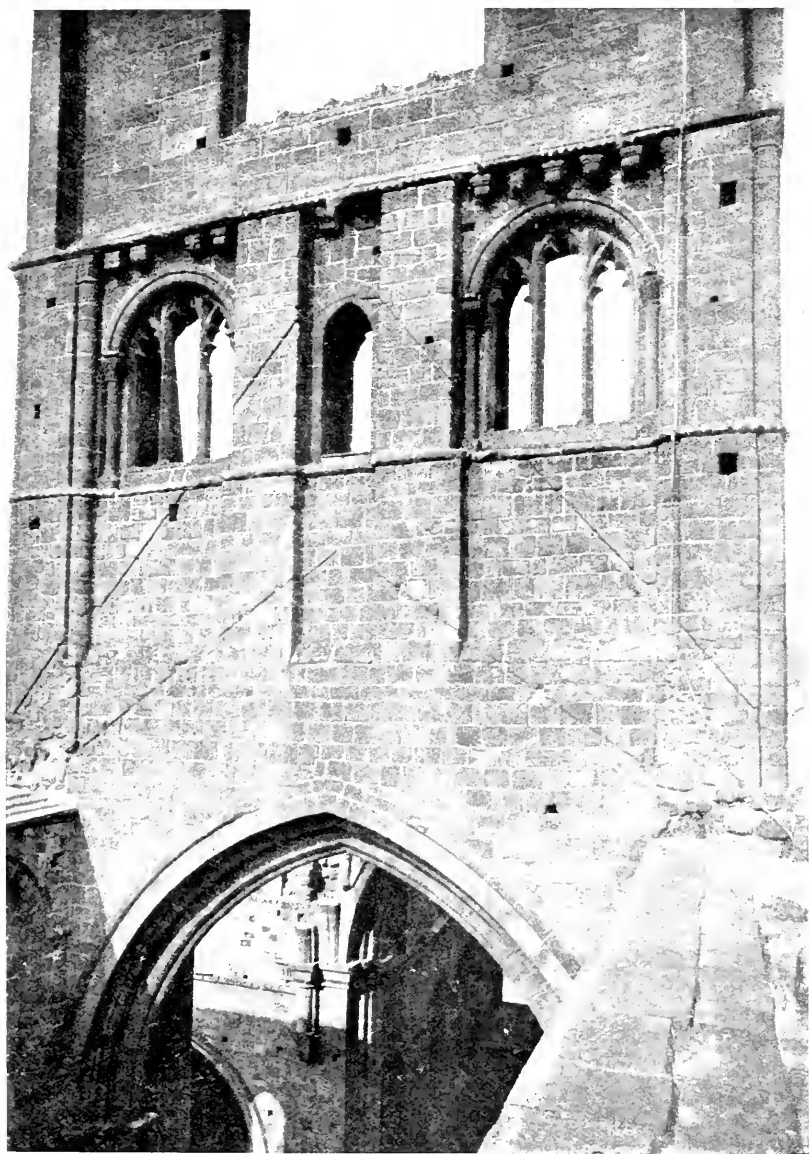
5. See figs. 12 and 61.

In the church at Kirkstall, all the main arches of construction—the arches of the crossing, of the transept chapels, and of the nave arcades, and the transverse ribs in the vaults of the presbytery and of the aisles of the nave—are pointed, while the arches of doorways, windows, and other minor openings remain semicircular. This simultaneous use of the pointed arch for the arches of construction with the semicircular arch for doorways, windows, etc., is equally characteristic of Fontenay, Fountains, Buildwas, and other early Cistercian churches.¹ This characteristic is not indeed specially Cistercian, and it is found everywhere in churches built during the period of the 'Transition.' Nevertheless, so far as England is concerned, there can be no doubt that Cistercian influence counted for much in popularizing the systematic use of the pointed arch. When the Cistercians began, in the second quarter of the twelfth century, to develop their own particular manner of building, the pointed arch had for some time been definitely established as part of the Burgundian system of construction, and it was used by the Cistercians almost without exception for the principal arches of construction in their churches. It would not indeed be difficult to quote examples of its use in England before the earliest surviving Cistercian work, and it was employed for the transverse ribs of the nave vault of Durham cathedral, built between 1128 and 1133. But at the time when the church at Fountains, or even when that at Kirkstall, was built, the use of the pointed arch was not so uniform in other English churches as it was in those of the Cistercians, and the influence of their building certainly hastened a change which, apart from them, was nevertheless inevitable.

The design of the church of Kirkstall is² marked by great simplicity of treatment, and by an almost entire absence of the rich decoration which is so characteristic of the later Romanesque. The plain wall-surfaces are unrelieved by the usual decorative wall-arcades, the only approach to anything of the kind being the little arcade of intersecting semicircular arches within the gable over the west doorway (fig. 15). Nevertheless some details, such as the capitals of the piers and the archivolts of the north and west doorways, show more elaboration than is usual in Cistercian churches abroad. In some respects, too, the treatment becomes rather less simple towards the west than it is in the eastern (and earlier) parts of the church.

1. In the earlier parts of the church at Pontigny, the arches of the lower windows of the transept are semicircular, but the arches of the clearstory windows of the transept, and of both aisle and clearstory windows in the nave, are pointed. The pointed arch is, of course, used everywhere for the main arches of construction.

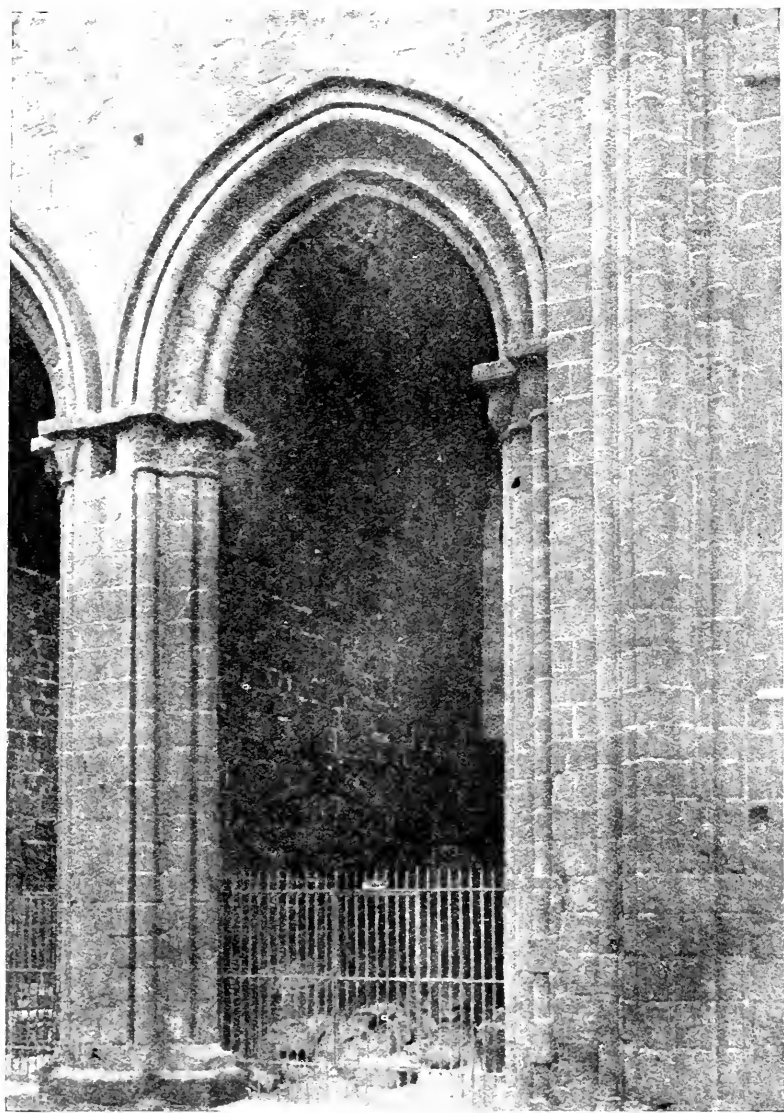
2. The reader is referred to Mr. Hope's exhaustive paper for a full description of the church in detail, which, of course, is not attempted in this paper.



Photographed by Godfrey Bingley.

Fig. 61. South face of the tower, with marks of transept roots.





Photographed by Godfrey Bingley.

Fig. 62. East side of north transept, south chapel.



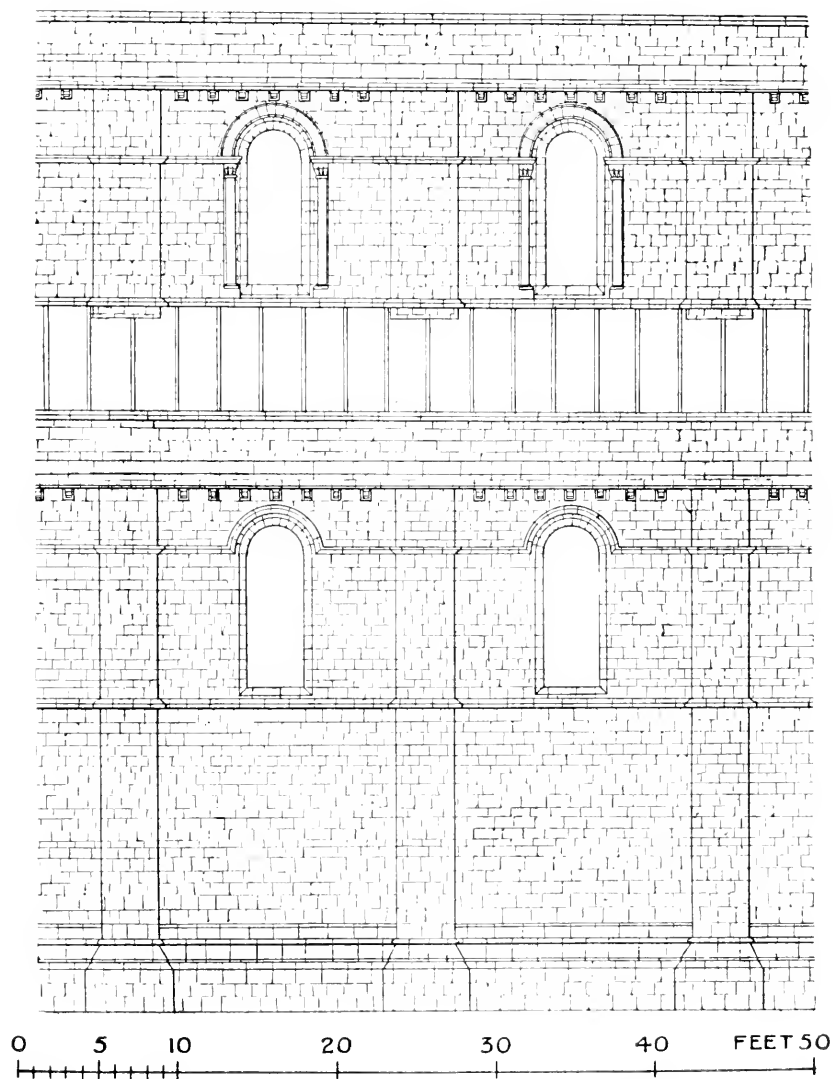


Fig. 63. Part internal elevation of nave, from Sharpe's *Parallels*.

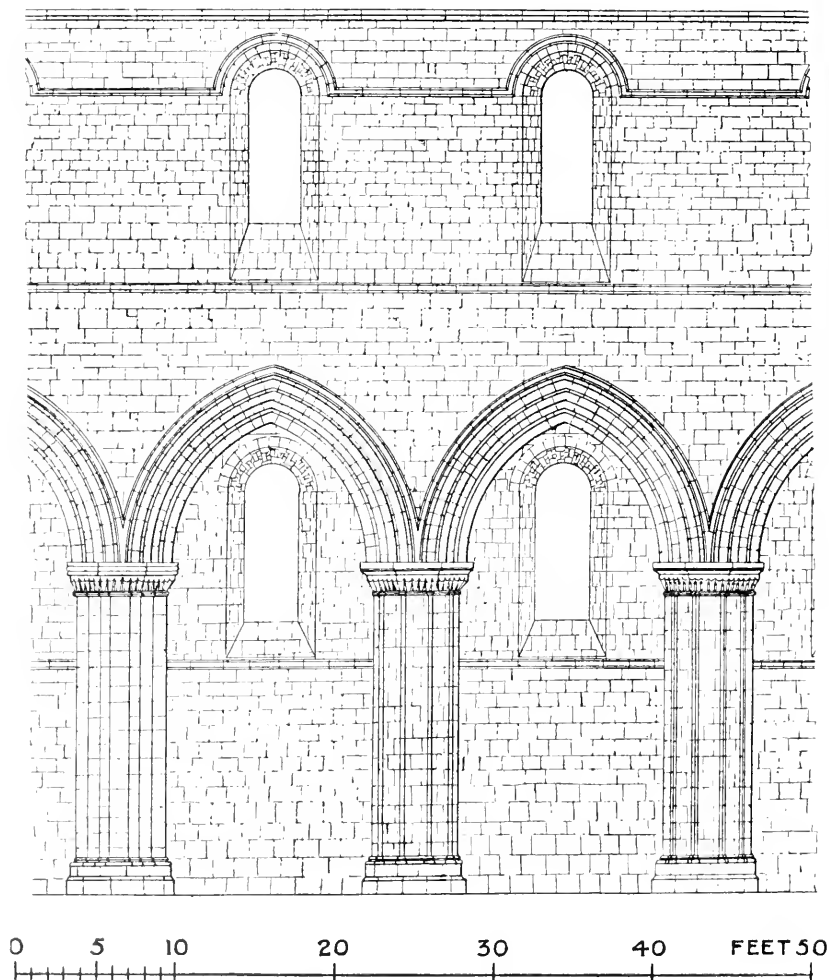


Fig. 64. Part internal elevation of nave, from Sharpe's *Parallels*.

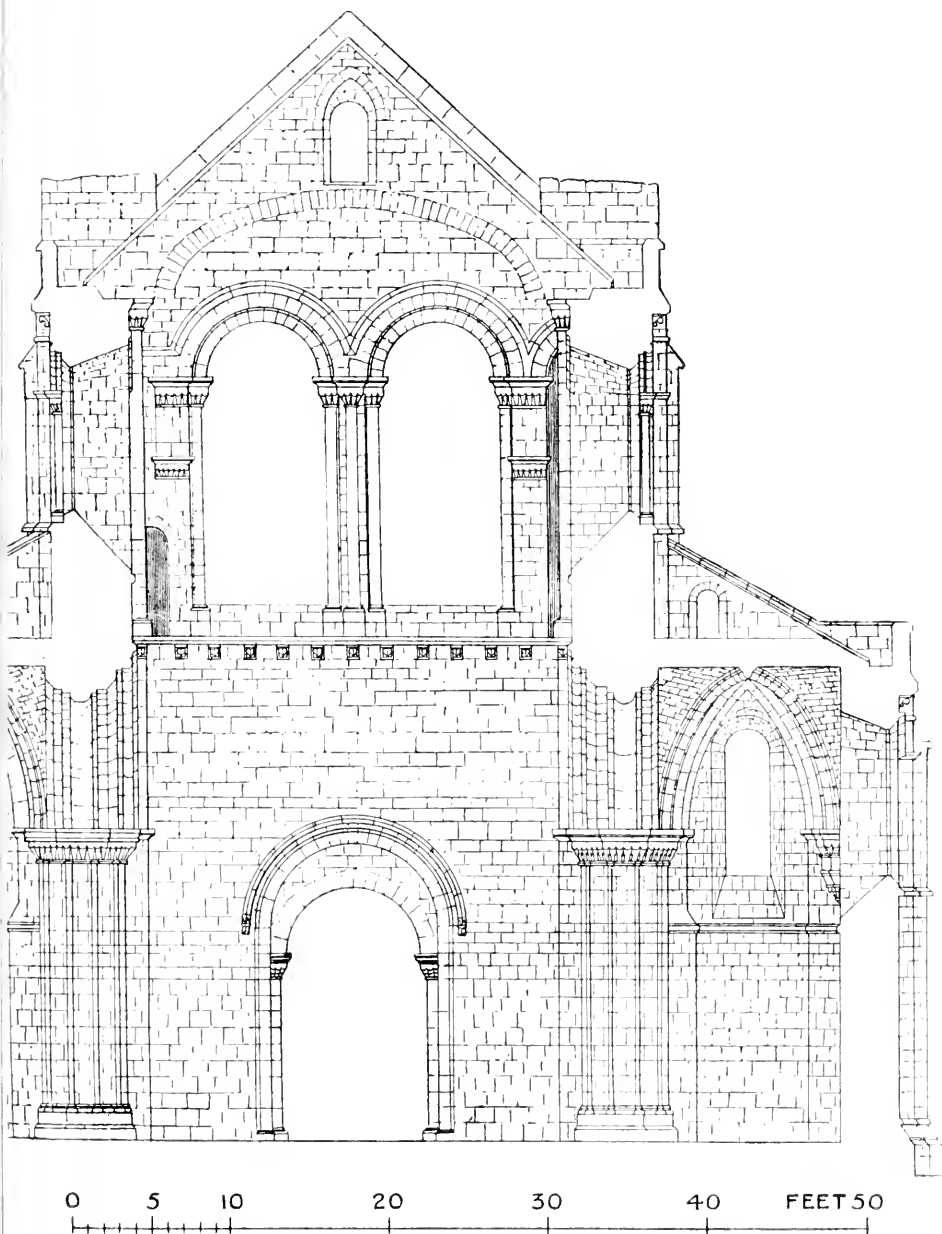


Fig. 65. Section of nave and internal elevation of west end,
from Sharpe's *Parallels*.

The openings from the transept to the chapels on its eastern side (figs. 7 and 62) closely resemble in their general design those in the corresponding position at Fountains,¹ and the piers and arches in both cases are of two orders, though the details are simpler at Fountains than at Kirkstall. At Fountains the inner order of pier and arch is square-edged, and the outer one chamfered. At Kirkstall, both orders of the pier have engaged shafts, and the section of the arch orders repeats that of the piers (fig. 72), not an uncommon feature in work of this period.

The external and internal elevations of the bays of the nave and aisles at Kirkstall (figs. 63 and 64) follow very closely, both in design and dimensions, those of the nave of Fountains,² and the nave of Buildwas, though of lower proportion, has the same general motive. In all three, the elevation is of two stories only, without a triforium stage. The triforium, frequently absent in Burgundian churches of the twelfth century,³ was omitted by the Cistercians in accordance with their desire for simplicity. M. Anthyme Saint-Paul says that it is never found in French Cistercian churches before the thirteenth century,⁴ but in this respect, as in others, the English Cistercians modified their strict practice sooner than was the case on the continent, and the later twelfth-century churches at Roche, Furness and Byland all have a triforium stage.⁵

The piers of the nave arcades at Fountains, Kirkstall, and Buildwas follow English precedent as illustrated in the great cylindrical piers of the naves of Gloucester, Tewkesbury, and Southwell. At Fountains the plain cylindrical piers have an attached shaft at each angle next the aisles to receive the unmoulded rear-arch of the arcade. At Buildwas the piers are simple cylinders.⁶ At Kirkstall (fig. 75) the treatment is more ornate, and, although the cylindrical motive is apparent, the piers are divided up into a series of shafts and angular fillets or rolls, while those of the western bays show the cluster of attached shafts which becomes general in later churches. The abaci of the capitals are octagonal on plan, like those on the nave side of the piers at Fountains. At Buildwas the abaci are subordinated to receive the arch orders. The pointed arches of the arcades at Kirkstall have three moulded orders on the side next the nave, as at Fountains, showing as two

1. J. A. Reeve, *op. cit.* pl. 10, reproduced in *Yorkshire Archaeological Journal*, xv. 285, fig. 2.

2. Compare the elevations of Fountains in E. Sharpe, *Architectural Parallels*, with those of Kirkstall in the same work, reproduced here in figs. 63 and 64.

3. C. Enlart, *Origines*, p. 260.

4. *A travers les monuments historiques*, quoted in C. Enlart, *Origines*, p. 225.

5. Saint-Jean d'Aupt (Haute-Savoie), which seems to date from the beginning of the thirteenth century, has a triforium. The bay-design of its ruined nave presents a close resemblance to that of the transept of Roche.

6. Except the easternmost on each side, that on the south being octagonal, and that on the north half cylindrical and half octagonal.



Photographed by Geoffrey Bingley.

Fig. 66. Part of the south arcade of the nave, looking east up the south aisle (showing pillars 5, 4, 3, 2 and 1).

orders on the back (fig. 72). At Buildwas the arch orders are square-edged, without mouldings, as is usually the case in contemporary Cistercian churches abroad.

The clearstory at Kirkstall, which occupies nearly one-third of the total height of the wall, has one semicircular-arched window in each bay, with plain internal splays and a double-chamfered string at the springing line continued around the arch as a hood-moulding, almost precisely as at Fountains. But while all the other windows in the church (except those at the west end of the nave) have simple chamfered jambs and arches, as at Fountains, those of the clearstories on the west side of the transept and of the clearstories on both sides of the nave each have inner chamfered jambs and arch, and single shafts in the outer jambs under an outer arch moulded with a simple roll without hood-mould (fig. 63). At Buildwas the nave clearstory windows are shafted internally, but not externally. As the transept and nave at Kirkstall were not vaulted, the bays are not divided by shafts. Even the vaults of the presbytery and of the nave aisles do not spring from wall-shafts, but only from corbels (to be noticed presently).

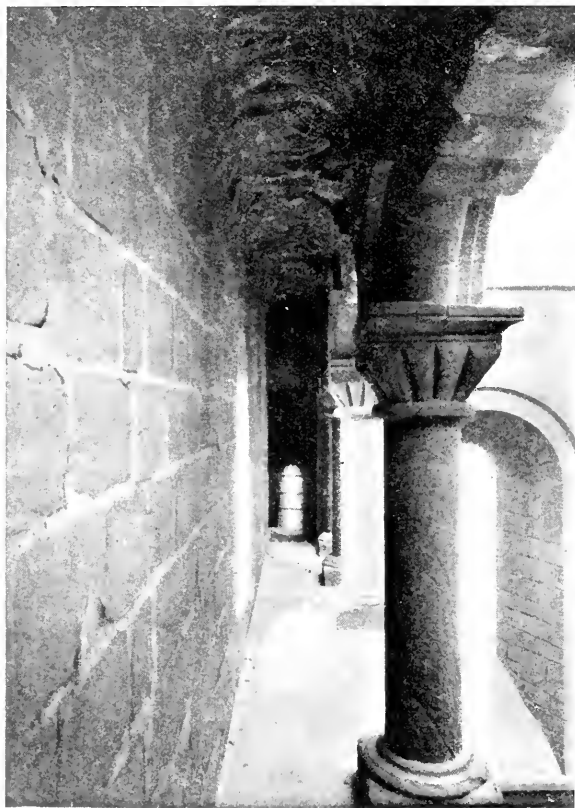
A point in the planning of the nave and aisles may be remarked here. The Romanesque builders frequently divided the total internal width of their churches into four equal parts, giving two to the nave and one to each of the aisles, the lines of division fixing the centre lines of the arcade piers.¹ At Kirkstall, as at Fountains and many other Cistercian churches, the aisles are narrower in proportion to the central span, and the bays of the aisles are decidedly oblong from east to west. Probably the reason was the severely practical one—as the aisles were merely passages, they needed only to be narrow. One effect of this was to reduce the height required for the slope of the aisle roof, and, with a low pitch to this roof (fig. 65), and deep splay to the sill of the clearstory window, the band of plain walling above the arcade arches, usually occupied by the triforium, was reduced to modest dimensions of height.

The transept at Kirkstall shows the same two-storied treatment of the elevation as in the nave, except at the south end of the south transept. Here is a wall-passage in the gable wall, below the clearstory windows, and in front of the passage is an arcade of six moulded semicircular arches on cylindrical shafts with scalloped capitals (figs. 10 and 67). A triforium passage of this kind is, I believe, a very unusual feature in a Cistercian church of this date.

Externally the walls are strengthened by flat pilaster buttresses, between the heads of which are ranges of corbels supporting projecting

1. As, for example, at Durham.

eaves-tables, all in the usual Anglo-Norman manner. It is curious to find that, although the presbytery is vaulted in two bays, its sides are divided externally by pilaster buttresses into three bays. The position of the westernmost buttress on each side appears to have been determined by the east wall of the transept chapels, from the top of which it rises, and the wall between the chapel and the buttress at the angle of the presbytery is divided equally by the other buttress. The great



Photographed by Godfrey Bingley.

Fig. 67. Wall-passage in south transept.

thickness of the side walls of the presbytery indicates, however, that this part of the church was intended to be vaulted from the first. The angles of the several gable ends are reinforced by broad pilaster buttresses of double projection in the usual manner, to receive the angle turrets at the springings of the gables. The gable ends of the presbytery and transept were divided into three by two narrow pilaster

buttresses, as in the north transept ends at Norwich and Peterborough, and as also in many Cistercian churches in all countries.¹

The elevation of the east end of the presbytery, as restored in Mr. Hope's drawing (fig. 18), shows a very characteristic Cistercian arrangement of the windows—three long windows with semicircular arches, surmounted by a large circular window. Circular windows are found in the works of all schools, and they were frequently used in Anglo-Norman architecture—e.g., in the nave clearstory at Southwell, and in the central tower of Norwich. But they are much more characteristic of the architecture of Burgundy in the twelfth century,² and the Cistercians carried the motive into all parts. The west end of Clairvaux had a large circular window over two narrow windows, and also a circular window in the south transept gable,³ and there is a foiled circle in each gable end of the transept at Pontigny (fig. 60). The arrangement at Kirkstall of a large circle over three narrow windows was probably that of the west front of Fountains,⁴ and it is still to be seen in the east ends of the presbyteries of Noirlac,⁵ Preully⁶ (Seine-et-Marne), and Fossanova,⁷ and in the west front of Silvacane.⁸ The east end of the presbytery at San Galgano has two tiers of three narrow windows, surmounted by a circular window.⁹ The west front of Vaux-de-Cernay (end of twelfth century) shows (over its west doorway) a beautiful example of a large circular window which retains its original simple tracery¹⁰—four large circles, with a small circle in the centre, and one small circle between two tiny circles in each of the four spandrels. Below and on each side of this window are two smaller circular openings, which recall the circular panels shown in Mr. Hope's drawing. The great circular window in the west front at Byland is a well-known example, nearly contemporary with that at Vaux-de-Cernay. An earlier example in England is to be seen in the east ends of the transept chapels at Fountains, which have a pair of semicircular-arched windows under a circular window in the gable.¹¹ Kirkstall followed Fountains in having a pair of semicircular-arched windows at the east end of each transept chapel,¹² but it is unlikely that there was ever a circular window over them, for Kirkstall did not follow the unusual gabled arrangement of the east wall of the chapels at Fountains.

1. As, for example, in the east end of the presbytery at Fontenay (fig. 57). Cf. the plans in fig. 96.

2. For examples, see C. Enlart, *Origines*, pp. 258-9.

3. Shown in Dom Milley's engraved views.

4. See the west elevations, external and internal, in E. Sharpe, *Architectural Parallels*.

5. E. Lefèvre Pontalis, *op. cit.* section of transept.

6. End of twelfth century.

7. C. Enlart, *Origines*, figs. 3 and 86. Cf. also Casamari, figs. 4 and 87, and pl. iv; Santa Maria d'Arbona, figs. 6 and 88; and San Martino, near Viterbo, pl. viii (transept).

8. H. Revoil, *op. cit.* ii. pl. xvii.

9. A. Canestrelli, *op. cit.* and C. Enlart, *Origines*, 51, 259.

10. L. Morize, *op. cit.* pl. v and vi.

11. J. A. Reeve, *op. cit.* pl. 10 and 11, reproduced in *Yorkshire Archaeological Journal*, xv. 285, fig. 2, and 317, fig. 12.

12. This can be clearly seen in the central chapel of the north transept.



Fig. 68. External elevation of west end, from Sharpe's *Parallels*.

The gable end of the north transept (fig. 17) has two tiers of three semicircular-arched windows, designed in the Anglo-Norman manner of which the north transept ends of Norwich and Peterborough show more elaborate examples. The east end of the presbytery of Buildwas was similarly designed with two tiers of three windows.¹ At Kirkstall the three lower windows are of much the same size as the adjoining windows in the west wall of the transept, but they are placed higher in the wall, the level being governed by the string beneath the sills internally, which continues the line of the abaci of the piers to the transept chapels on the east, the string being stepped down in the western angle to the lower level of the windows in the west wall (figs. 7 and 8). The three upper windows are of equal height, and range with the clearstory. The narrow pilaster buttresses between the window finish with weatherings above the level of the arches of the upper windows. The gable has been altered, but it apparently had a large pointed oval window.²

The gable end of the south transept (figs. 20, 23, and 33), above the roof of the range of buildings on the east side of the cloister, has three semicircular-arched windows of equal height ranging with the clearstory, and separated by narrow pilaster buttresses. The treatment of the gable is, however, quite different from that of the north transept. At some distance above the windows, the narrow buttresses are banded together by relieving arches, those on each side being semicircular, and that in the centre pointed, rising much higher than the side arches, and enclosing originally a pointed oval window in the gable. This relieving-arch motive, although not exclusively Burgundian,³ is very common in Burgundian architecture,⁴ and is frequently found in Cistercian building. The external faces of the south walls of the *cellarium* at Clairvaux, which was part of St. Bernard's rebuilding, have pilaster buttresses banded with semicircular arches, precisely as in the *cellarium* (figs. 50, 52 and 54) and upper part of the eastern range (figs. 23 and 33) at Kirkstall. The same motive is found in the *cellarium* at Vaucclair⁵ (Aisne), the *cellarium* at Longpont (Aisne), the *cellarium* and clearstory of the church at Villers (Belgium), the infirmary at Ourscamp (Oise), the frater at Bonport⁶ (Eure), and the eastern range at the Cistercian nunnery of Fontaine-Guérard (Eure).

1. The east end of the presbytery at Fontenay (fig. 57) has also two tiers of three windows, but the treatment, which is simple even to bareness, is different. The narrow pilaster buttresses between the three tall semi-circular arched lower windows stop below the string under the sill of the three upper windows in the gable, which have pointed arches, and are set closer together than the windows below, the central window being higher than the window on each side.

2. See Mr. Hope's description, p. 24 *supra*.

3. At Saint-Étienne, Caen, the pilaster buttresses of the aisle walls of the nave are banded together with semicircular arches over the windows of the triforium stage (V. Ruprich-Robert, *L'architecture normande*, ii, pl. xv).

4. C. Enlart, *Origines*, 264.

5. C. Enlart, *Manuel d'archéologie française*, ii, 41, fig. 19 (from Verdier and Cattors, *Architecture civile et domestique*).

6. E. Chevallier, *Notre-Dame de Bonport*, fig. 30 (pointed arches).

In the church at Breuil-Benoît, the nave clearstory has pointed relieving arches between the buttresses.¹

The elevation of the west end of the nave at Kirkstall (figs. 1 and 68) is less simply treated than any other part of the church. The west doorway, which has a semicircular arch of five orders, is set in a projection beyond the external face of the wall, which is finished by a gable in the fashion common in churches of this period in Normandy and England. The stage above has two semicircular arched windows, wider and higher than any other windows in the church, and shafted both externally and internally. In the extreme angle on each side is a shaft which apparently received a great semicircular relieving arch in the gable, within which was a large circular window, part of the outer order of which is still to be seen on the inside. In the angles of the west wall inside, there is a tall attached shaft on each side, rising to the top of the side walls of the nave (figs. 68 and 69); apparently these shafts must have received a great internal relieving arch, as on the outside. The inside of the west end of Fountains seems to have been treated in a similar manner.² As at Fountains, too, there is a narrow gallery within the west windows,³ approached from the stair in the south-west angle of the south aisle and giving access to the spaces between the vaults and roofs of the aisles; the projecting string at the floor of the gallery is carried by a range of corbels, as at Fountains. It will be noticed that this west front of Kirkstall, in its original condition, presented a further example of the use of the circular window and relieving arch, which has been discussed above.

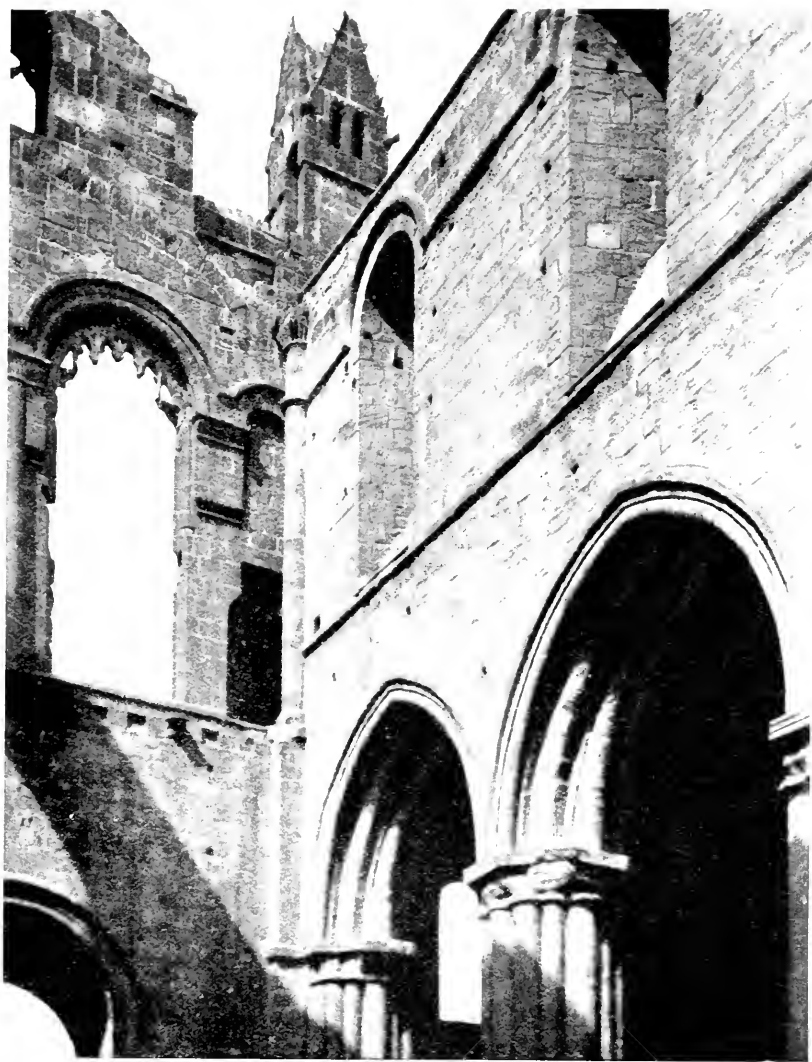
Like most Cistercian building, the church at Kirkstall is very well built, as indeed is proved by the fact that it still remains so complete after the neglect of the centuries following the suppression.⁴ It is built of the local sandstone, a millstone-grit known in modern times as Bramley Fall stone. The stone is coarse-grained, and extremely hard, which accounts for a certain bluntness in the rendering of the finer details. The walls are faced, both inside and outside, with dressed stone, the average height of the beds being about 10 inches. The joints are of moderate thickness, varying considerably, but averaging

1. *Ibid.* p. 106.

2. See the drawing of this elevation (restored) in E. Sharpe, *Architectural Parallels*.

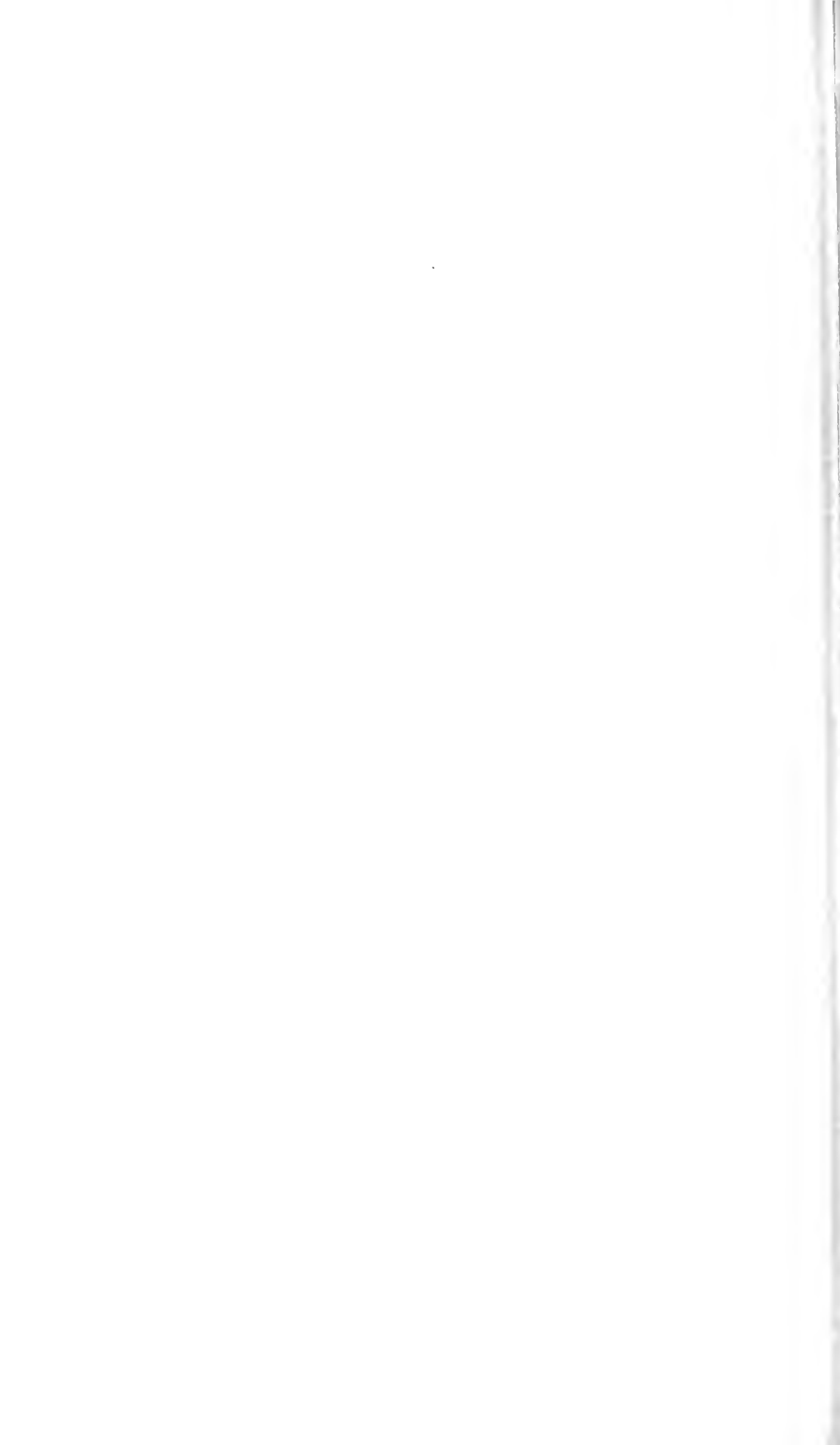
3. At Vaux-de-Cernay there is a similar gallery inside the west window, obtained by giving the wall below a greater thickness than above (L. Morize, *op. cit.* pl. vii). The gallery was approached from a stair in the north-west angle of the north aisle (the cloister here was on the north side of the church), and it gave access to the roof spaces over the aisle vaults.

4. I cannot refrain here from expressing my strong sense of the obligation which archaeology owes to the late J. T. Micklethwaite, distinguished Yorkshireman, architect, and antiquary, for his admirably conservative treatment of the abbey buildings. Their life has been prolonged for the admiration and instruction of posterity, and, if this has inevitably involved some loss of the picturesque, that is but a trifling price to pay for the result. Unfortunately it would be only too easy to mention similar ruins which are deteriorating disastrously, and even hastening to destruction, for want of those reasonable remedial measures which have been applied at Kirkstall. Those who value 'picturesqueness' before everything may reflect with advantage on the possible loss of both building and picturesqueness which may be the natural result of their ill-advised policy.



Photographed by Geoffrey Bingley.

Fig. 69. North-west angle of nave.





Photographed by Godfrey Bingley.

Fig. 70. Vaulting of the south aisle of the nave, looking east.



something like half-an-inch. The faces of the stones have been fine-axed, the plain wall-stones diagonally, and the moulded surfaces horizontally or vertically as the case may be. The roofs were covered with tiles,¹ as those at Fontenay are to this day.

I have left to the last one of the most important questions of structure—the vaults of the presbytery and aisles of the nave—which must be considered in relation to the general development of twelfth-century architecture in England. Before discussing this point, however, it is necessary to describe the vaults themselves.

The presbytery is covered with quadripartite ribbed vaults, in two oblong bays² (fig. 56). The westernmost transverse rib is placed a little to the east of the eastern arch of the crossing, and the space between the two is covered by a narrow strip of pointed barrel vault, in rubble. The ribs of the vault spring from corbels of similar design to those in the aisles of the nave. The transverse ribs are pointed, and the diagonal ribs appear to be true semicircles.³ The transverse and diagonal ribs have similar profiles, a large half-roll flanked by a flat on each side, but the transverse ribs are considerably wider than the diagonal ribs. The ribs are in separate stones from the springings. The junctions of the lateral cells with the side walls form pointed arched curves, but there are no wall-ribs. On the east wall, however, there is a narrow square-edged wall-rib, forming a pointed arch.⁴ The crowns of the vault cells appear to be level, and the cells are probably parts of cylinders.⁵

The aisles of the nave are covered with quadripartite ribbed vaults (figs. 70 and 71), in bays which are pronounced oblongs on plan. In the bay measured (fig. 71),⁵ the dimensions are 16 ft. 5 ins. from east to west, within the transverse ribs, and 11 ft. 10 ins. from north to south, from the aisle wall to the back of the arcade arch. The ribs of the vault spring from the octagonal capitals of the arcade piers on the one side, and from triple corbels (fig. 76) projecting from the aisle wall on the other side. The transverse ribs across the aisle are pointed, stilted some 8 or 9 inches. The arcade arches are pointed, the soffit curves being struck from centres which divide the span into

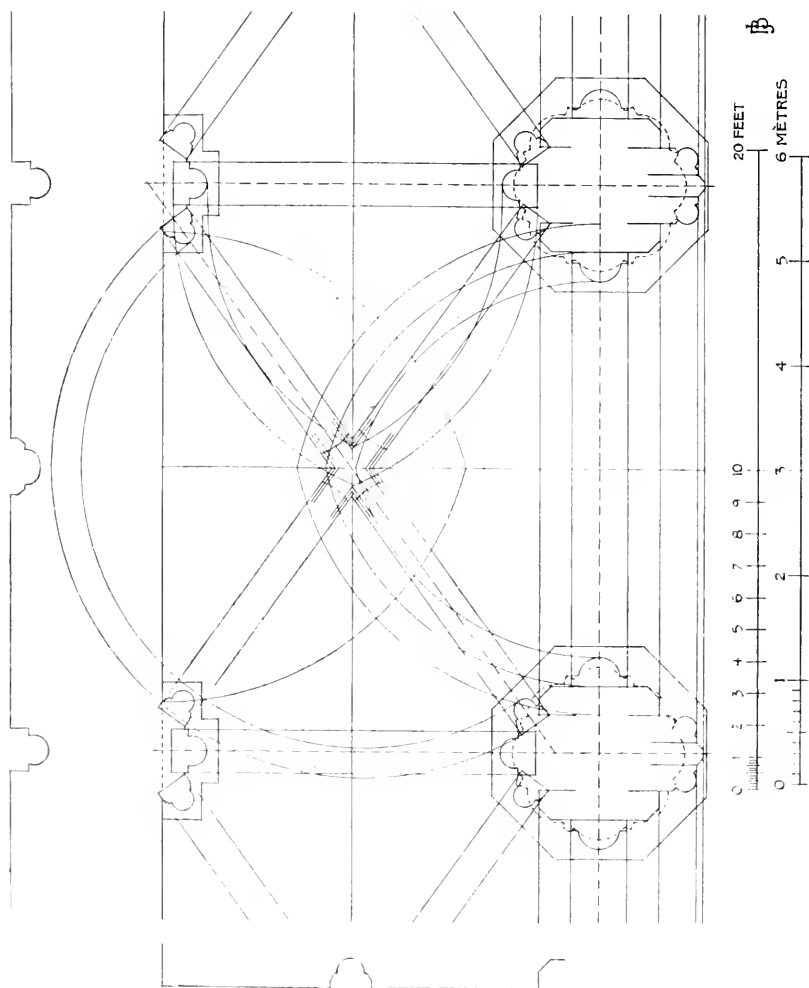
1. See Mr. Hope's paper, p. 4 *supra*.

2. The presbytery of Buildwas was also covered with two bays of quadripartite ribbed vaults, springing from corbels, but only the springers now remain. The vaults had no wall-ribs, and the transverse ribs were doubtless pointed, like the crossing-arches, but the profiles of the ribs are more advanced than those at Kirkstall.

3. I believe these observations to be accurate, but they are not founded on actual measurement, for it would be impossible to measure these vaults without scaffolding. Their system, however, appears to be exactly the same as that of the nave aisle vaults, which I have measured.

4. The wall-rib appears in unribbed groined vaults before the end of the eleventh century, in a rudimentary form in the wall-arches of the ambulatory and apsidal chapels at Gloucester, and as a narrow square-edged member in the aisles and ambulatory at Norwich. Ribbed vaults as a rule, however, have no wall-rib before the third quarter of the twelfth century. The vaults of the eastern arm of St. Cross (Hampshire) have narrow square-edged wall ribs, and the vaults at Byland have moulded wall-ribs.

5. South aisle, fourth bay from transept. In the plan of the vault, fig. 71, the dotted centre line of the rib or arch on plan represents the springing line on which the rib or arch-curve is set up. This drawing also shows the sections at the crown in each direction.



Measured and drawn by John Bilson. Fig. 71. Vault of south aisle of nave.

three nearly equal parts. The diagonal ribs are true semicircles.¹ The junctions of the lateral cells with the aisle wall form pointed arched curves, corresponding to those of the arcade arches, and there are no wall-ribs. The transverse ribs² have the same profile as the ribs of the presbytery vault, a large half-roll flanked by a flat on each side (fig. 72). The diagonal ribs, which are considerably narrower, have a somewhat similar profile, but the angles of the flat on each side are bevelled off³ (fig. 72). The keys of the diagonal ribs are shouldered, and the joints are at right-angles to the rib. All the ribs are in separate stones from the springings. The crowns of the vault cells are level in both directions,⁴ and geometrically the cells are parts of cylinders, having been built on a centering of straight boards from rib to rib, etc. It is evident from this description and from fig. 71 that the section of the arcade arches was designed with the aisle vault, and that the curves of these arches were governed by the vault. The controlling factors were the semicircular curve of the diagonal rib, and the level crowns of the vault cells.

The cells of the vaults of the presbytery and nave aisles are constructed in rubble masonry of rough thin stones, coursed roughly parallel with the ridges. The barrel vaults of the transept chapels are constructed in the same manner. All were intended to be plastered, in accordance with the uniform Anglo-Norman practice of the time.

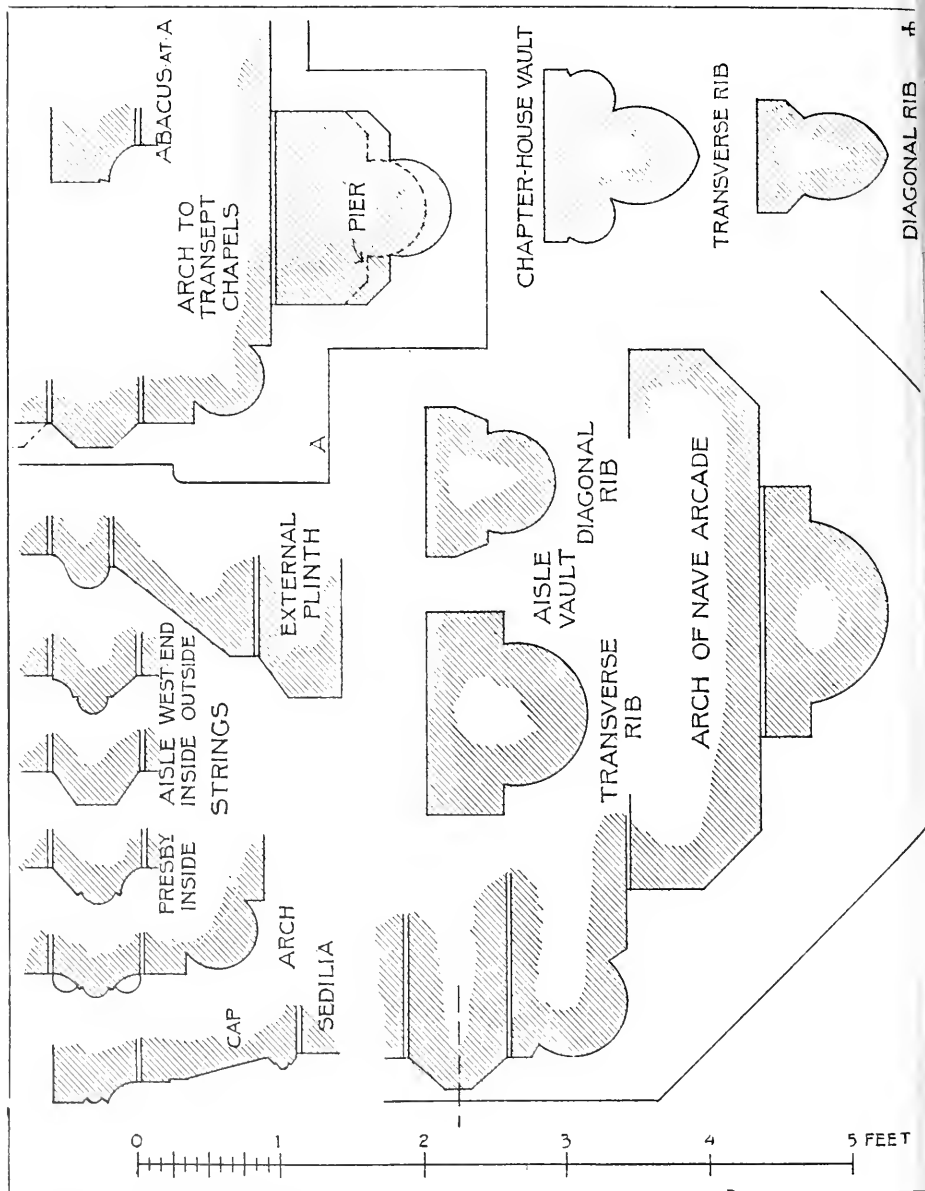
It is worthy of remark that, although the transverse ribs of the presbytery and aisle vaults are pointed, those of the vaults of the original buildings around the cloister are semicircular. The vaulting of the chapter-house (figs. 25 and 26) follows the system of the earliest Anglo-Norman ribbed vaults—semicircular transverse ribs, and segmental diagonal ribs the curves of which are struck from centres below the level of the springing. The profile of the transverse rib shows a keeled roll between two small rolls, and that of the diagonal rib is a keeled roll, quirked, the rib being of less width than the transverse rib (fig. 72). The vaulting of the ground story of the *cellarium* (fig. 49) appears, from the indications which remain, to have followed the same system; here the transverse ribs had the same profile as the transverse ribs of the aisle vaults, and the diagonal ribs have the same profile as the diagonal ribs of the chapter-house vault. The profiles prove that the vaults of the chapter-house and of the ground-story of the *cellarium*,

1. In the bay measured, the curve of the diagonal rib is actually some 3 inches lower than a true semicircle, but this is probably due to settlement.

2. In the drawing of the aisle bay in E. Sharpe, *Architectural Parallels*, the profiles of the transverse and diagonal ribs are unaccountably transposed. The sections of these two ribs in another plate of the same work are drawn too large in scale; so also in the copies of them in F. Bond, *Gothic Architecture in England* (London, 1905), p. 673.

3. This is also the profile of the inner orders of the piers and arches of the openings from the transept to the eastern chapels (fig. 72), and of the inner order of the eastern arches of the earlier part of the chapter-house.

4. In the bay measured, the extreme variation in the level of the crowns is 3 inches, but settlement must be taken into account.



Measured and drawn by John Bilson.

Fig. 72. Details of mouldings.

in spite of their semicircular arches, were designed at a later date than the aisle vaults of the church. In the sub-vault of the dorter (figs. 28 and 29), there is an even more remarkable reversion to an earlier type of vaulting—unribbed groined vaults on semicircular transverse ribs—in work which is of a continuous build with the chapter-house.¹

It is probable that the reversion to the semicircular arch in the buildings around the cloister was due to the necessity of keeping the vaults comparatively low, on account of the story above. The same thing is to be seen at Fontenay where, although all the main arches of construction in the church are pointed, the vaults of the later chapter-house and dorter sub-vault (which are not earlier than c. 1160) have the same system as the vaulting of the chapter-house at Kirkstall—semicircular transverse ribs and segmental diagonal ribs.² The use of the unribbed and ribbed groined vault simultaneously is characteristic of twelfth-century Burgundian architecture,³ and is not uncommon in Cistercian building outside Burgundy.⁴ The *cellarium* at Clairvaux, of St. Bernard's time, affords an interesting early example. The ground-story has ribbed vaulting, with semicircular transverse ribs, these and the diagonal ribs being large and unmoulded. The upper story has unribbed groined vaulting on pointed transverse ribs, also unmoulded.⁵

To return to the vaults of the church at Kirkstall. The vaults of the presbytery and nave aisles are among the very earliest examples in England of the *complete* solution of the Gothic problem, so far as vaulting itself is concerned.⁶ We naturally inquire what were the precise influences which brought about this solution at Kirkstall. Was it a case of foreign importation, from Burgundy by the Cistercians, or from the Ile-de-France whose marvellous advance had already commenced before Kirkstall was begun? Or is it to be regarded as a native English development? The question is one of great difficulty, but I will attempt to give at least a probable answer.

The question of importation from Burgundy by the Cistercians may be answered at once, and in the negative. Burgundy was not one of the districts which was the earliest to develop the ribbed vault. The church at Pontigny is contemporary with Kirkstall, and, as the church of one of the mother-houses of the order, we may fairly look upon it as an adequate representative of Cistercian construction of

1. See p. 84, note 1, *supra*, for some comparison of details.

2. The vaults of the chapter-house at Vézelay follow the same system.

3. This mixture of vault-systems is found in all schools in the twelfth century, but it is very common in Burgundy. It is not rare in Cistercian and civil buildings of the thirteenth century, and lasts into the fourteenth century in the school of southern France.

4. A late example in Normandy occurs at Breuil-Benoit, begun c. 1190, and consecrated in 1224, where the chapels around the ambulatory have unribbed vaults, although the other vaults in the church are ribbed (E. Chevallier, *Notre-Dame de Bonport*, p. 106, and plan fig. 52).

5. I am indebted to the kindness of the Rev. Canon J. T. Fowler and to his photographs for this and other information on the *cellarium* at Clairvaux.

6. I.e. apart from the question of abutment of high vaults.

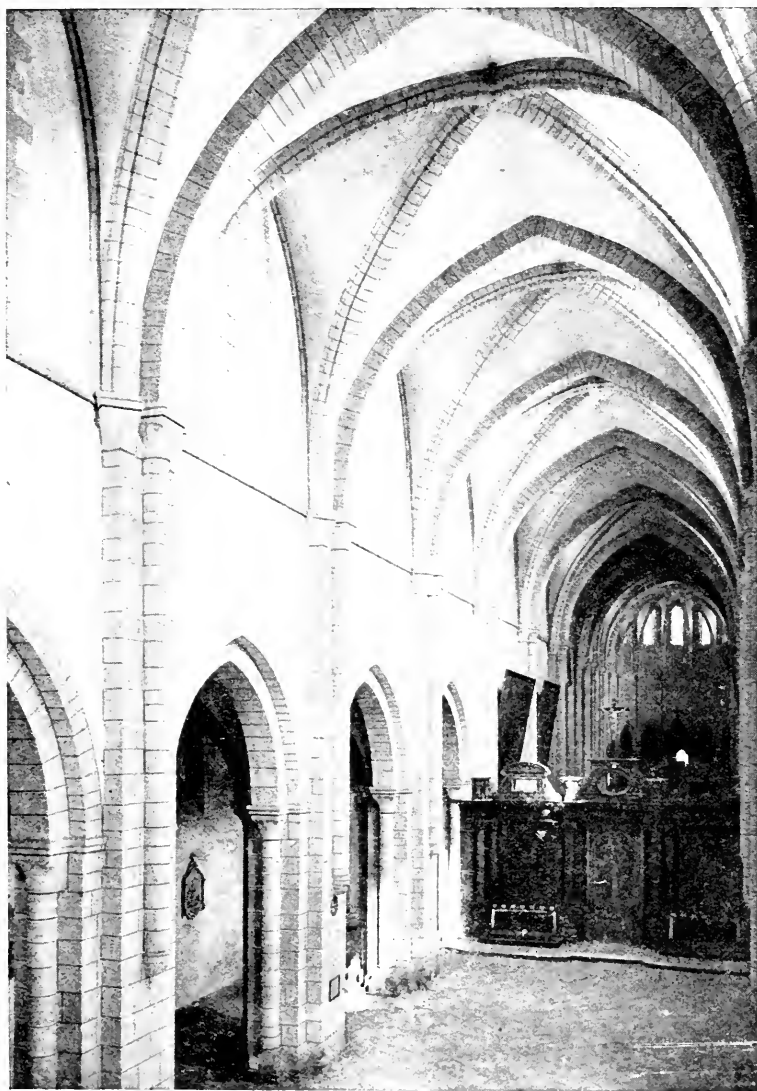
the time.¹ Yet the vaults of its transept chapels, the high vaults of the transept, and the vaults of the aisles of the nave, are still unribbed vaults (on pointed arches), and it is only in the high vault of the nave itself (fig. 73) that the rib was introduced in the course of the construction, springing from supports which were obviously designed to receive unribbed vaults. Clearly, therefore, the builders of Kirkstall could not have borrowed the system of their vaults from Burgundy, and there is nothing Burgundian either in their construction or details.

With regard to the Ile-de-France, the systematic use of the ribbed vault does not seem to have begun before about 1130. In this school, however, the pointed arch was employed in the ribbed vault almost from the first. In the absence of definite dates, the precise chronology of the earliest examples is still open to some difference of opinion. Nevertheless it is beyond all doubt that by the time of the Suger's rebuilding of Saint-Denis, the narthex of which was completed in 1140, and the choir in 1144, the new system had been completely developed. In view of the relative dates, it is therefore quite possible that the builders of Kirkstall may have known of the solution arrived at in the Ile-de-France.

According to the evidence at present available, the ribbed vault was used by the Anglo-Norman school a quarter of a century before its appearance in the Ile-de-France. In the earliest dated example, the choir aisles of Durham (begun in 1093), and in the early examples which follow, the transverse ribs are semicircular, sometimes stilted, and the diagonal ribs are segmental, struck from centres below the springing line. Sometimes the crowns are level, but frequently they rise towards the key of the diagonal rib, in order to gain greater strength by increasing the height of the segmental diagonal rib. The next step in advance was to make the diagonal ribs semicircular, tilting the semicircular curves of the transverse ribs, so that the crowns were level, or nearly so. This method is proved by some existing examples of the first half of the twelfth century. The vaulting over the nave of Durham, built between 1128 and 1133, presents more than a suggestion of the final solution, for, not only are the diagonal ribs semicircular, but the transverse ribs are pointed, though their curves are awkwardly struck from centres below the springing line. It might be suggested that the Kirkstall vaults were directly descended from the Durham nave vault, but between them there is something like a quarter of a century, which does not afford very much evidence of progress in this particular respect, so far as England is concerned.² Indeed any English examples of the ribbed vault, with the pointed arch, which can

1. I refer here to the existing parts of the earlier building, and not to the later eastern extension.

2. The advance in Normandy, in the development of the sexpartite vault, is not here in question.



Photographed by C. Enlart.

Fig. 73. Pontigny, interior of church from south-west.



with any show of probability be attributed to an earlier date than 1150, are so rare as to call for special remark.¹

The Kirkstall vaults are, with the important exception of the pointed arch, purely Anglo-Norman in their construction, as well as in their details. The plastered rubble cells continue the tradition of the earlier vaults mentioned above, in contrast with the regularly coursed and worked masonry of the cells (*voitains appareillés*) of contemporary and earlier vaults in the Ile-de-France. The profiles of the ribs are exactly the same as those which occur in much earlier Anglo-Norman vaults, or, in the case of the diagonal ribs of the aisle vaults, are developments from them. With regard to the pointed arch, we know that it was employed at an earlier date in the transept and nave of Fountains, as in the transept of Kirkstall, apart from any connexion with the ribbed vault. While, therefore, it is impossible to assert positively that the Kirkstall builders knew nothing of the solution of the Ile-de-France, it seems to me that there may be some ground for explaining these Kirkstall vaults as a continuance of the Anglo-Norman system, modified by the Cistercian use of the pointed arch. It is true that we have examples of the pointed arch in connection with the ribbed vault in some English churches,² almost contemporary with Kirkstall, the design of which indicates that their builders had some knowledge of what was being done in contemporary work in the Ile-de-France, or more probably in Normandy, which by that time had to some extent come under the influence of the Ile-de-France. But, as we shall see presently, there is nothing in the church at Kirkstall which can with the least probability be attributed to French influence until we come to the latest work of all, in the west front and the north clearstory of the nave. It is beyond all doubt that the pointed arch at Fountains and Kirkstall represents quite another building tradition, and its application to the current system of Anglo-Norman ribbed vaulting may with some plausibility be considered to be a sufficient explanation of the Kirkstall vaults.

1. The vaults of the nave aisles of Malmesbury have been frequently quoted as the earliest example in England of pointed transverse ribs (the diagonal ribs are semicircular). In *The Beginnings of Gothic Architecture*, in the *Journal R. I. B. A.* 3rd ser. vi. 309 (1899), I said that "the existing nave cannot be assigned to a later date than the middle of the twelfth century." Mr. W. R. Lethaby, in his *Medieval Art* (London, 1904), pp. 133-4, does not share this opinion, and he thinks that "we are not justified in supposing that the pointed arcade of the interior and the aisle vaults are earlier than c. 1160." This is possible, but there is reason to believe that the nave aisles simply followed the system of the choir aisles, which may quite well have been built before 1150. However this may be, Mr. Lethaby goes on to say that he considers that the aisle vaults of Malmesbury show "a knowledge of the solution arrived at in the Ile-de-France." This opinion appears to me to be almost as debatable as his view that "it is probable that at least the first principles of the system were obtained from the East." Acknowledging, as Mr. Lethaby does, that the nave vault at Durham was built between 1128 and 1133, it need not be assumed that the first pointed transverse ribs in England must necessarily have been inspired from the Ile-de-France. What is certain is that, apart from the pointed arch, the Malmesbury vaults are purely Anglo-Norman, both in their construction and in their details.

2. Eg. St. Cross (Hampshire), which was probably begun before the church at Kirkstall was finished.

DETAILS.

I propose now to touch briefly on those characteristics of the ornamentation of the church which I have not already noticed above.

PIERS. The piers at the western angles of the presbytery, under the east arch of the crossing, consist simply of a large three-quarter attached shaft, the projection on the west side being brought out to the square under the capital by a straight corbel, scalloped (fig. 56).

The piers under the north and south arches of the crossing (figs. 56, 62 and 74) are more refined in their detail, although the eastern piers are continuous work with the piers at the angles of the presbytery. Each consists of a pilaster projection, on the face of which is a group of shafts in two orders; the outer order has an attached shaft on each side; the inner order has an attached shaft on the face of a narrow pilaster, of the usual plan except that here the angles of the pilaster are chamfered.

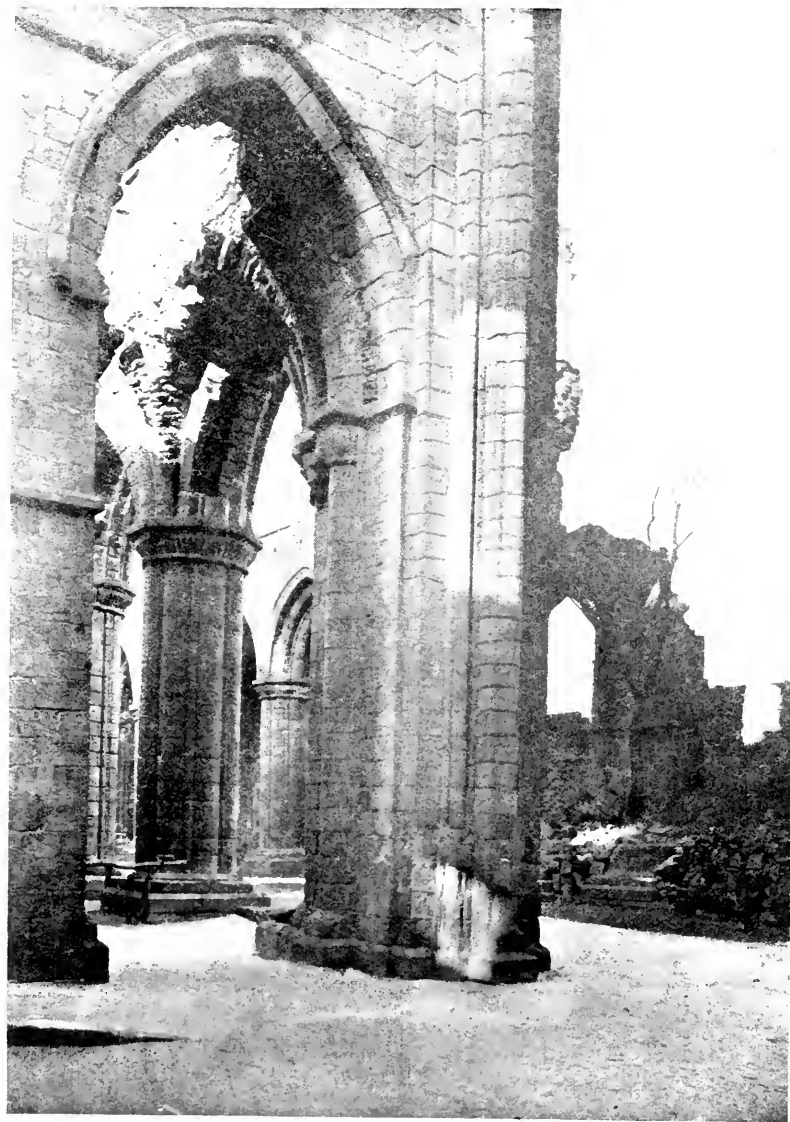
The west arch of the crossing (fig. 8) springs from corbel supports (see below), and, as is frequently the case in monastic churches, no pier projects from the wall face, on account of the stalls.

The piers to the openings into the chapels on the east side of the transept (fig. 62) have each two orders of attached shafts, of precisely the same plan as those under the north and south arches of the crossing (fig. 72).

The piers under the inner order of the arches opening from the west side of the transept into the aisles of the nave (fig. 74) have each an attached shaft on a pilaster projection, of the usual plan with square angles (not chamfered, as in the piers described above).

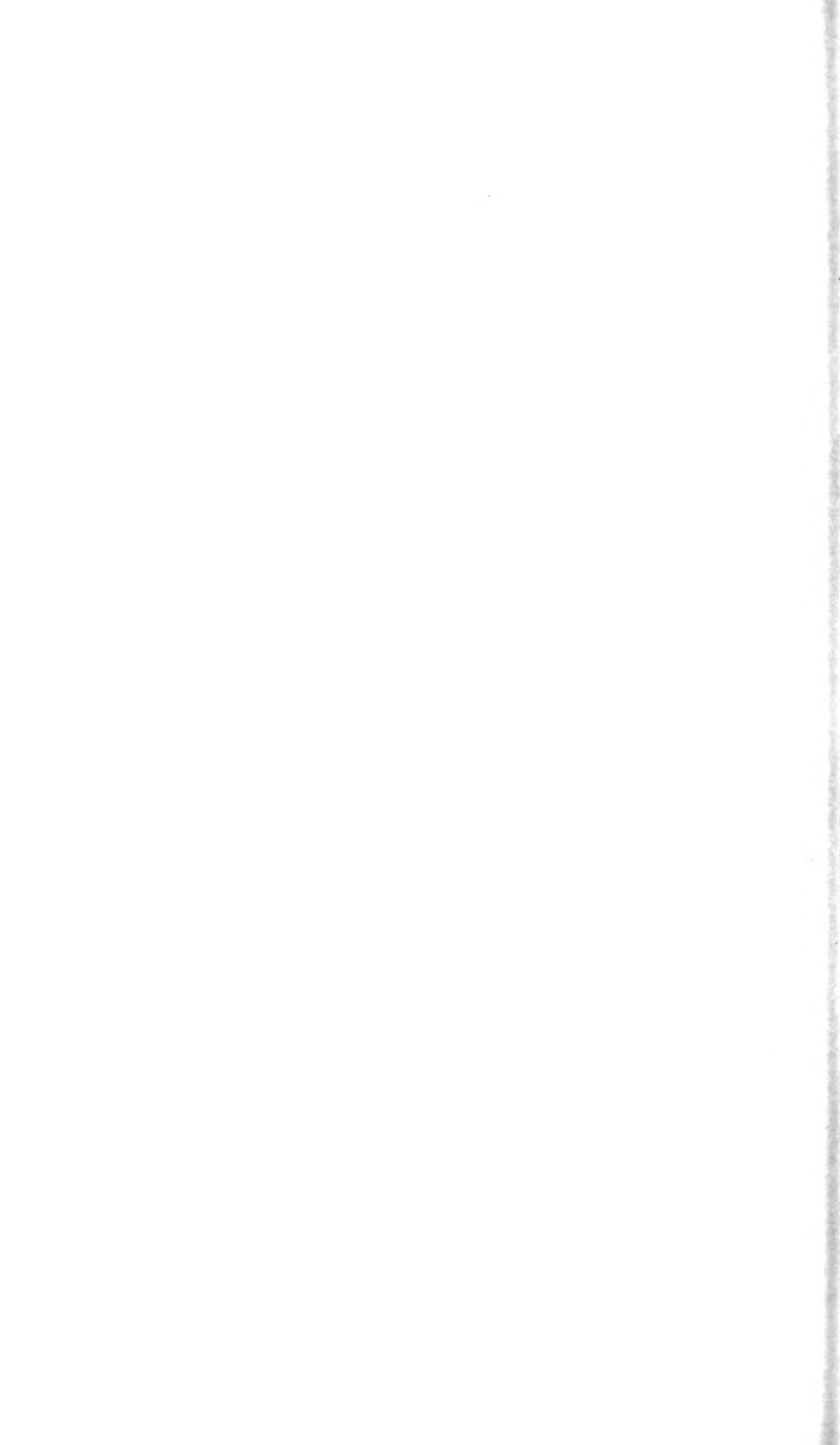
The piers of the nave arcades are, as already mentioned, modelled on the great cylindrical pier motive, but they are elaborated by a series of shallow shafts, etc., as shown on the plans in fig. 75. The opposite pair of piers on each side of the nave have the same plan. The eastern respond piers and the first, second, and third piers from the east¹ have the plan A, eight shallow shafts separated alternately by a roll (or small shaft) and an angular fillet. In the second pier, the positions of these small members are reversed. In the fourth pier on each side, all the smaller members are angle fillets (B), and in the fifth all are rolls (C). The sixth and seventh piers on each side, each have a cluster of twelve attached shafts of three different diameters (D), and the western respond piers are of the same design (fig. 14). The plan D shows an approach to the type of clustered pier which was soon to become general in English churches.

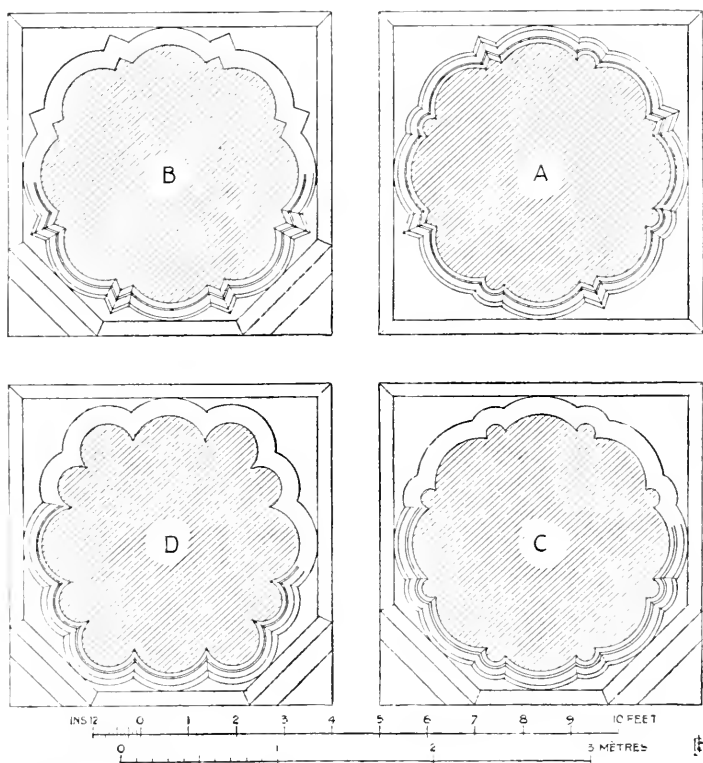
1. On the north side, the eastern respond and the first pier are modern. Mr. Micklethwaite's method of treating his new masonry makes it perfectly easy to distinguish new from old.



Photographed by Godfrey Bingley.

Fig. 74. Arch from south transept to south aisle, now built up.





Measured and drawn by John Bilson.

Fig. 75. Plans of nave piers.

CORBEL SUPPORTS. The method of supporting the springings of arches and vaults on corbels, instead of attached shafts rising from the floor, is extremely common in Burgundian architecture, and it is one of the motives most frequently imported by the Cistercians into other countries.¹ Practical in all things, the preference shown by the Cistercians for this form of support was doubtless due to the fact that it left all the floor space free and unobstructed by projections from the faces of the walls. Kirkstall presents numerous examples of this motive, both in the church and in the monastic buildings. Generally it takes the form of a short length of attached shaft, with the usual form of capital above, and finished below with a reversed cone. The supports of the west arch of the crossing show single corbels of this kind (figs. 8 and 81). The corbels which receive the springings of the vaulting-ribs of the presbytery (fig. 56) are of

1. For examples from Burgundy and Italy, see C. Enlart, *Origines*, pp. 267-272.

almost precisely the same pattern as those on the aisle walls of the nave (fig. 76). They consist of a group of three scalloped capitals, on three very short attached shafts, the central shaft projecting more than that on each side. The side shafts are supported on single reversed cones, and the central shaft on a reversed cone in two stages with a necking between them. Several of the lower corbels under the central shaft take the reeded form¹ of the corbels shown in fig. 77 (from the south end of the dorter sub-vault). The conical corbel, of which good examples are to be seen at Buildwas (crossing), Roche (transept),² and in the eastern range at Fountains, had a considerable vogue in English twelfth and thirteenth-century architecture.

Another kind of corbel takes the form of a straight impost corbelled out from the wall-face. This occurs under the east arch of the crossing at Fountains,³ and the transverse arches across the nave aisles there are supported by corbels of this type. At Kirkstall it occurs under the east and west arches of the crossing, in continuation of capitals (figs. 56 and 81), and also under the short pilasters which flank the west windows of the nave, on the inside (figs. 65 and 69). These corbels are either scalloped, or ornamented in similar fashion to some of the capitals described below.

BASES. The base mouldings in the church at Kirkstall, which usually surmount a chamfered plinth, have very simple and shallow-cut profiles. The bases to the piers of the nave arcades are illustrated by fig. 78.⁴ Those to the easternmost piers (1 south, 1 north, and 2 south⁵) show a series of shallow rolls, a slightly more developed profile than that of the bases of the nave arcade piers at Fountains, which have two chamfered faces above a roll. Further west (3 south, 4 north, and N.W. respond) the bases have a shallow hollow between a small upper and a larger lower roll. A similar profile occurs in the bases of the wall-shafts in the chapter-house, and of the columns in the dorter sub-vault. These profiles show a gradual advance⁶ from the simple base mouldings of the Anglo-Norman Romanesque to the graceful form of the bases of the cloister arcade (fig. 92).

1. This also occurs in the corbel-supports of the vault over the ground story of the *cellarium*, parlour, and old day-stair, and in the angle corbels of the chapter-house.

2. E. Sharpe, *The Ornamentation of the Transitional Period of British Architecture* (London, 1871), No. 1, pl. 23.

3. J. A. Reeve, *op. cit.* pl. 5 and 10, and the reproductions in *Yorkshire Archaeological Journal*, xv. figs. 1 and 2 (pp. 283 and 285).

4. I have to thank Mr. Sydney D. Kitson, M. A., for his kindness in making the drawings from which figs. 78, 93, 94, and 95 have been reproduced. I have also to thank Mr. J. V. Saunders, M.A., of Hymers College, Hull, for kindly taking specially for me the photographs from which figs. 76, 77, 79, 83, 84, 85, 88, 89, 90, and 91 have been reproduced.

5. The piers are numbered from the east, 1 being the first pier west of the crossing.

6. The advance towards the 'Attic base' is still more marked in the bases of the west doorway at Fountains.



Photographed by J. V. Saunders.

Fig. 76. Vault corbel, north aisle of nave.



Photographed by J. V. Saunders.

Fig. 77. Vault corbel at south end of sub-vault of dorter.





Photographed by J. V. Saunders.

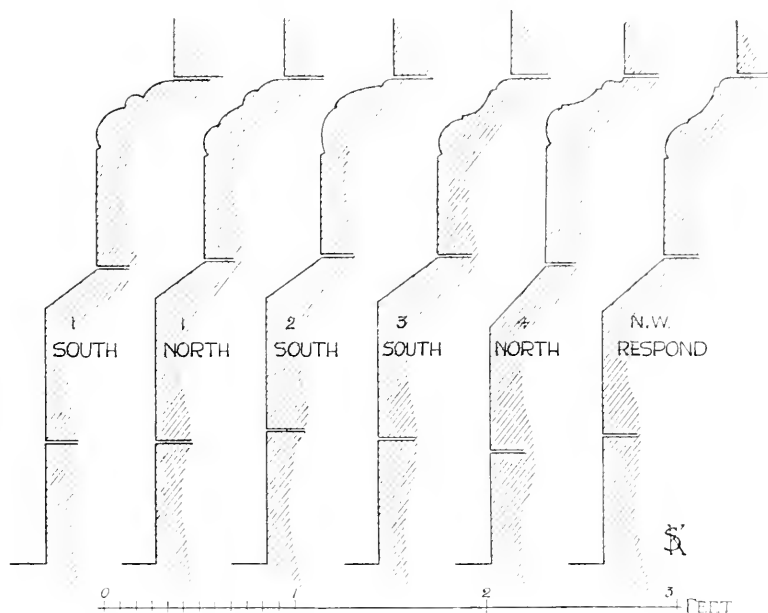
Fig. 79. Piscina in presbytery, west jamb.



Photographed by J. W. Westmoreland.

Fig. 80. Nave arcade, angle of base.





Measured and drawn by Sydney D. Kilson.

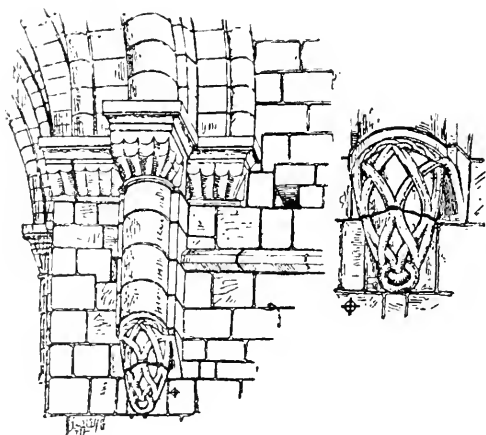
Fig. 78. Base mouldings of nave arcades.

It has already been remarked that the Cistercian renunciation of ornament was interpreted less strictly in their churches in England than it was in those of Burgundy. This is especially true of the ornamentation of the capitals at Fountains and Kirkstall, which indicate how the Anglo-Norman tradition in design overcame Cistercian simplicity. The capitals at Kirkstall show the great variety and inventiveness in ornamental detail which is so characteristic of the latest Romanesque manner in our country. I will attempt to indicate the principal varieties.

Some few details in the church show interlacing ornament which is an interesting survival of a pre-Conquest motive¹. The resemblance to earlier work is most marked in the interlacing on the flat face of the impost on the west jamb of the piscina in the south wall of the presbytery (fig. 79), and in the knot-work on the base of one of the nave piers,² (fig. 80). In both cases the cord forms a continuation of one of the moulded members; in the piscina impost it continues the sunk bead on the flat face above the hollow, and in the base the two ends of the cord continue one of the base-mouldings. The corbel which

1. These are fully described in a paper by the late J. T. Irvine, *Notes on specimens of interlacing ornament which occur at Kirkstall Abbey*, in the *Journal of the British Archaeological Association*, xlviii. 26. Fig. 81 is reproduced from one of Mr. Irvine's illustrations in this paper.

2. Pier 3 north, north-west angle of base.



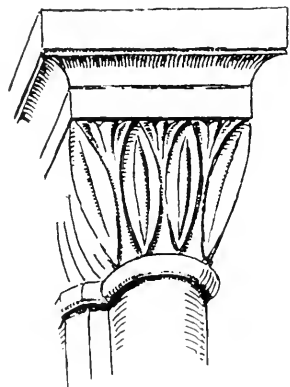
Drawn by J. T. Irvine.

Fig. 81. South-west crossing pier, corbel.

supports the short shaft under the southern springing of the west arch of the crossing is ornamented with an interlaced cord (fig. 81), which bears but little resemblance to Saxon interlacings. The capitals under the northern springing of the arch opening into the southern chapel of the north transept are carved with an interlacing pattern terminating in leafage (fig. 85). There is something of the interlacing motive, but more leafage, in the vigorously carved capital under the southern springing of the arch opening from the north transept into the north aisle (fig. 84).

A simple and effective treatment of leaves set upright occurs on the capitals under the northern springing of the arch opening into the central chapel of the south transept (fig. 82).¹ This may be compared with the charmingly refined leaf ornament which is found on some of the capitals of the arcade piers² and on some of the corbels on the aisle wall of the nave of Fountains, but there the carving is in shallower relief, and the lower ends of the leaves are not pointed.

The capitals in the church, however, show far more frequently some variety of the scalloped capital, a form extremely



Drawn by John Bilson.

Fig. 82. South transept, middle chapel, capital of north jamb.

1. The capitals on the north side of the north chapel of the south transept are also carved with leafage, now much decayed.

2. One of the pier-capitals is illustrated in E. Sharpe, *Ornamentation of the Transitional Period*, No. 1, pl. 5.



Photographed by J. V. Saunders.

Fig 83. North transept, north chapel.
capitals of north jamb.



Photographed by J. V. Saunders.

Fig. 84. Arch from north transept to
north aisle, capital on south side.



Photographed by J. V. Saunders.

Fig. 85. North transept, south chapel, capitals of north jamb.

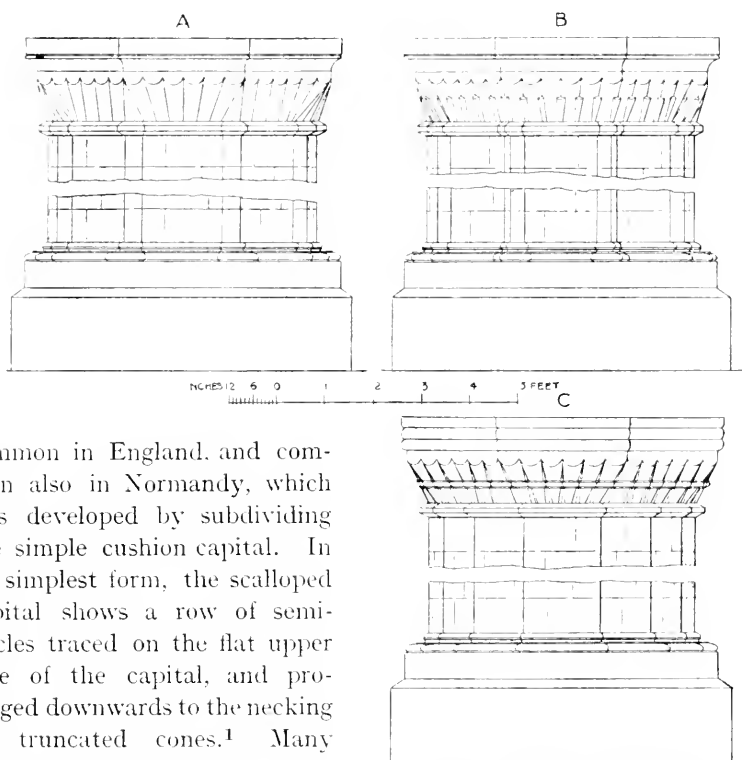


Fig. 86. Nave arcade piers,
from Sharpe's *Parallels*.

common in England, and common also in Normandy, which was developed by subdividing the simple cushion capital. In its simplest form, the scalloped capital shows a row of semi-circles traced on the flat upper face of the capital, and prolonged downwards to the necking by truncated cones.¹ Many examples of this simple form are to be seen in the church, e.g. under the crossing arches (fig. 81), under the arches opening into the transept chapels (fig. 83), in the triforium at the south end of the south transept (fig. 67), to the arcade piers in the nave (figs. 66 and 70, and at A on fig. 86), and in the south-west doorway² (figs. 87 and 89), north doorway (fig. 90), and west doorway. In the capitals of the arcade piers in the nave, the cones of the scallops under the octagonal abacus follow the lines of the shafts, etc., of the piers (figs. 13, 66, and 70).

In some of the capitals, the scalloped face is sunk below the flat face immediately beneath the abacus, forming a horizontal line above the scallops. This occurs in the capitals of the sedilia on the south side of the presbytery (figs. 5 and 72), in the capitals under the arches opening into the transept chapels (fig. 83), and in some of the capitals under the crossing arches. Elsewhere as a rule the upper face is not sunk in this manner (fig. 86).

1. Hence it is called by some the cone-bearing or coniferous capital.

2. In referring to the doorways, I shall use the short descriptions of 'south-east doorway' for the doorway from the south aisle opposite the east walk of the cloister, and 'south-west doorway' for the doorway from the south aisle to the 'lane.'

In some scalloped capitals, the cones are convex, and come to a point above the necking, dying down on to a straight or indented face. This form, which is rare at Kirkstall, occurs on the north side of the northern chapel of north transept (fig. 83), and on the south side of the central chapel of the south transept.

A common variety of the scalloped capital is that in which the cones are separated by V-shaped fillets diminishing upwards, and in some of the capitals of the arcade piers in the nave this projection is rounded, as a narrow cone diminishing upwards between the wider cones of the scallops.¹ In others the cones are separated by V-shaped indentations; this occurs in the transept,² crossing, and south-west doorway³ at Kirkstall, and in the nave and south-west doorway at Fountains. In another variety, a reed cut square at the top is placed between the cones (B on fig. 86); this occurs rarely in the transept,⁴ and on two capitals in the nave arcade (3 south, and 6 south).⁵

Other varieties show decorations upon the faces of the cones under the scallops. In the sedilia on the south side of the presbytery, the capital on the west side has cords crossed saltire-fashion over each of the cones, and that on the east side has a reed on the face of each cone. One of the nave arcade capitals (2 south) has two reeds on the face of each cone. More frequently a row of flutes is set close around the lower part of the cones, as in several capitals of the nave arcade,⁶ one in the triforium at south end of south transept, those on the west jamb of the south-east doorway (fig. 88), and many of those in the west doorway (fig. 91). The straight corbels inside the west front show scallops over flutes, over flute and reed cut square at top alternately, and over leaves set vertically. Other capitals show a row of flutes with straight pointed tops, as in the south-east respond of nave arcade, north doorway (fig. 90), and west doorway (north jamb). A capital in the south-west doorway shows two rows of such flutes (fig. 89), and one capital in the nave arcade (2 south) has one such flute between each cone. In the clearstory on the west side of the north transept, the indented or zigzagged line which forms the top of the flutes or grooves takes the place of the scallop, as in one of the capitals in the west doorway at Fountains (south jamb).⁷ In some other capitals, which are otherwise simply scalloped, a small horizontal moulding is

1. Piers 2 north, 5 north, and north-west and south-west responds. Illustrated in E. Sharpe, *Ornamentation of the Transitional Period*, No. 1, pl. 6.

2. North transept, south chapel, south side. South transept, north chapel, south side.

3. East side, inner capital.

4. North transept, central chapel, north side, outer capital. South transept, triforium at south end, north and south capitals.

5. Illustrated in E. Sharpe, *Ornamentation of the Transitional Period*, No. 1, pl. 6. The reed cut square at the top between the cones occurs in the nave of Fountains (arcade pier and aisle corbel). Cf. E. Sharpe, *op. cit.* No. 1, pl. 3 (Peterborough, nave), and pl. 16 (Steving, Sussex); and No. 2, pl. 4 (Ely, Infirmary). I noticed a loose capital of this kind at Vaux-de-Cernay—a Norman 'erratic.'

6. 4 north, 7 north, 7 south, and part of N. W. respond.

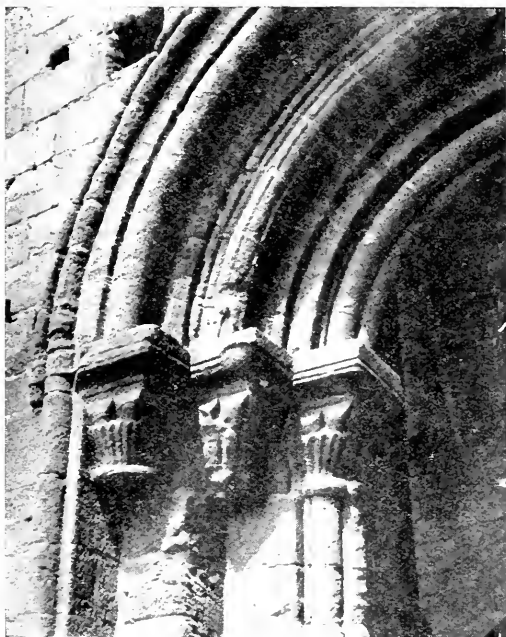
7. Cf. E. Sharpe, *op. cit.* No. 1, pl. 17 (Steving, Sussex).



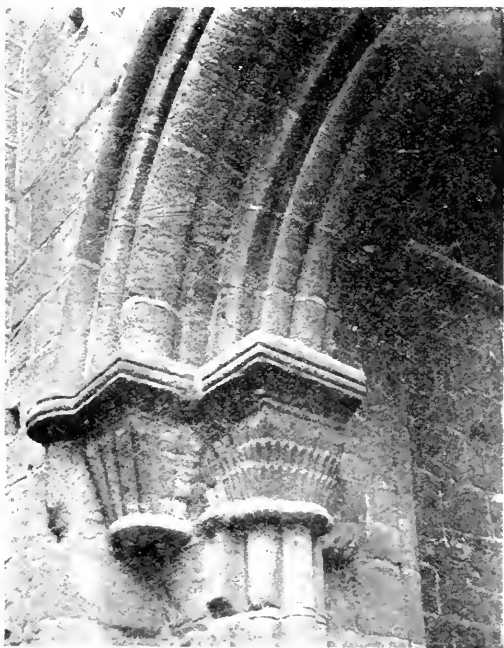
Photographed by Godfrey Bingley.

Fig. 87. Western doorway from the cloister into the church.



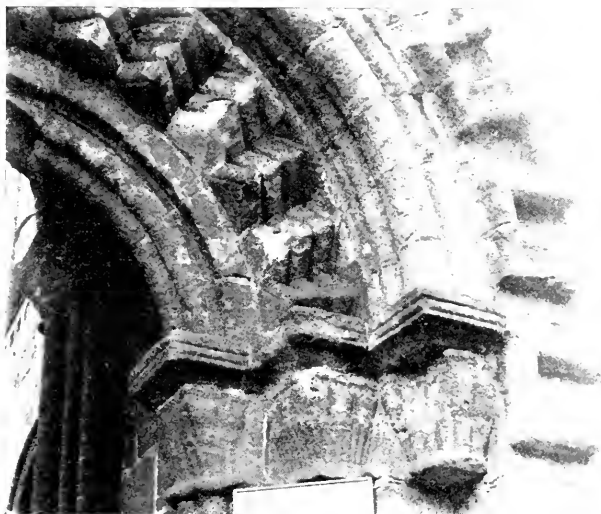


Photographed by J. V. Saunders.
 Fig. 88. Eastern doorway from cloister to church, west jamb.



Photographed by J. V. Saunders.
 Fig. 89. Western doorway from cloister to church, west jamb.





Photographed by J. V. Saunders.

Fig. 90. North doorway of nave, west jamb.



Photographed by J. V. Saunders.

Fig. 91. West doorway of nave, south jamb.



worked around mid-height of the cones; this occurs in the nave arcade (3 north, and 6 north), as illustrated at C on fig. 86, and on the east jamb of the south-east doorway. The west doorway of Fountains (north jamb) has a capital of this kind.

As to the neckings of the capitals, those to the sedilia on the south side of the presbytery show a quirked bead between two chamfers (fig. 72), a profile which also occurs in the north transept.¹ The neckings of the capitals on the north side of the north chapel of the north transept are ornamented with a two-cord plait (fig. 83). With these exceptions, the neckings are generally either a simple roll, or chamfered on upper and lower edges, which are also the general forms of the neckings at Fountains.

The abaci of the capitals to the sedilia (fig. 72), and those of the capitals to the jamb-shafts of the four doorways (figs. 88, 89, 90 and 91) have a flat upper face with a sunk bead above a hollow. Elsewhere in the church, the abaci are almost invariably profiled with a flat upper face, a quirk, and a hollow (fig. 72 at A, and fig. 86, A and B), which is also the usual profile in the church at Fountains. On the two westernmost piers on each side of the nave and the western responds, whose plan differs from those of the other piers, the capitals have abaci of three rolls of equal projection (fig. 86 at C).

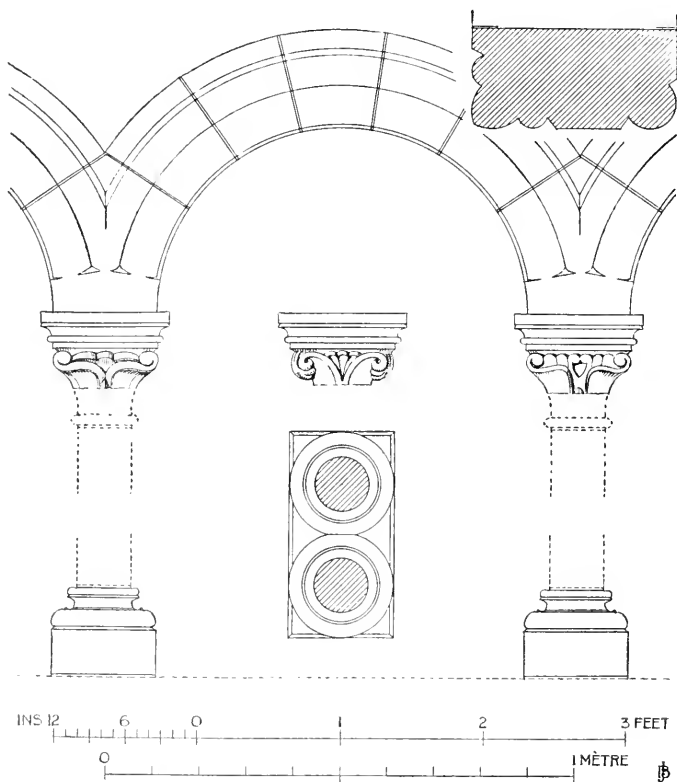
All the capitals described above belong to the current English manner of the time. None of them shows the plain hollow bell which was so much affected by the Cistercians, both in England and abroad, as exemplified at Roche, where the church must have been begun somewhere about the time that the church at Kirkstall was finished. Nor have we yet met with any capital whose hollow bell is decorated with the simple water-leaf curling over at the top, called by Mr. Sharpe 'the Transitional volute,' which we find at Buildwas, at Roche, in the slightly later work of the eastern parts of Byland, and in the eastern range at Fountains, the *edificia sumptuosa* built by abbot Robert (1170-9).² Nevertheless in those parts of the church at Kirkstall which were built last of all—the upper part of the west front, and the clearstory on the north side of the nave—we do find a few capitals which show some approach towards the later manner. The capitals of the central jamb shafts of the west windows (outside) show flat-leafed volutes above a row of closely set flutes. In the north clearstory of the nave, outside, one of the jamb shafts to each window in the five westernmost bays has a capital with flat leaves,³ although all the other capitals are of the scalloped type. The cloister arcade, which appears

1. E.g. north chapel, south jamb.

2. *Memorials of Fountains*, i, 114, 132.

3. Capitals with similar flat leaves are to be seen in two of the vault-correls of the *cellarium* (sixth from north on east side, and southernmost on west side), and in the east jamb of the westernmost doorway from the cloister to the frater (fig. 40).

to have been the latest work undertaken to complete the monastery, shows a still more developed design, in line with the earlier work at Byland, and with the eastern range at Fountains, as may be seen from the restoration in fig. 92, which I have drawn from the existing fragments.¹ The arcade was of the usual twin-shaft type, with semi-circular arches.² The capitals present considerable variety in their



Measured and drawn by John Bilson.

Fig. 92. Details of cloister arcade (restored).

design, and the mouldings of the square abaci, more advanced than any in the church, show a profile which became very common in the second half of the twelfth century (e.g. Roche and Byland). With these few exceptions, however, which show the coming of what we call Gothic,

1. These fragments, which now lie in the central chapel of the north transept, are also shown in part in fig. 21. The capitals, bases, and arch-stones have been said to be of Caen stone, which they are not. I have the authority of Professor P. F. Kendall, who has kindly examined them, for pronouncing them to be of magnesian limestone. I think there can be no doubt that the stone came from the Bramham Moor range, lying to the west of Tadcaster and Sherburn. The shafts, however, are of Bramley Fall stone.

2. Cf. the somewhat earlier arcade of the narthex at Fountains, and some beautiful fragments still preserved at Bridlington. There are some small fragments of a similar cloister arcade at Kirkstall.

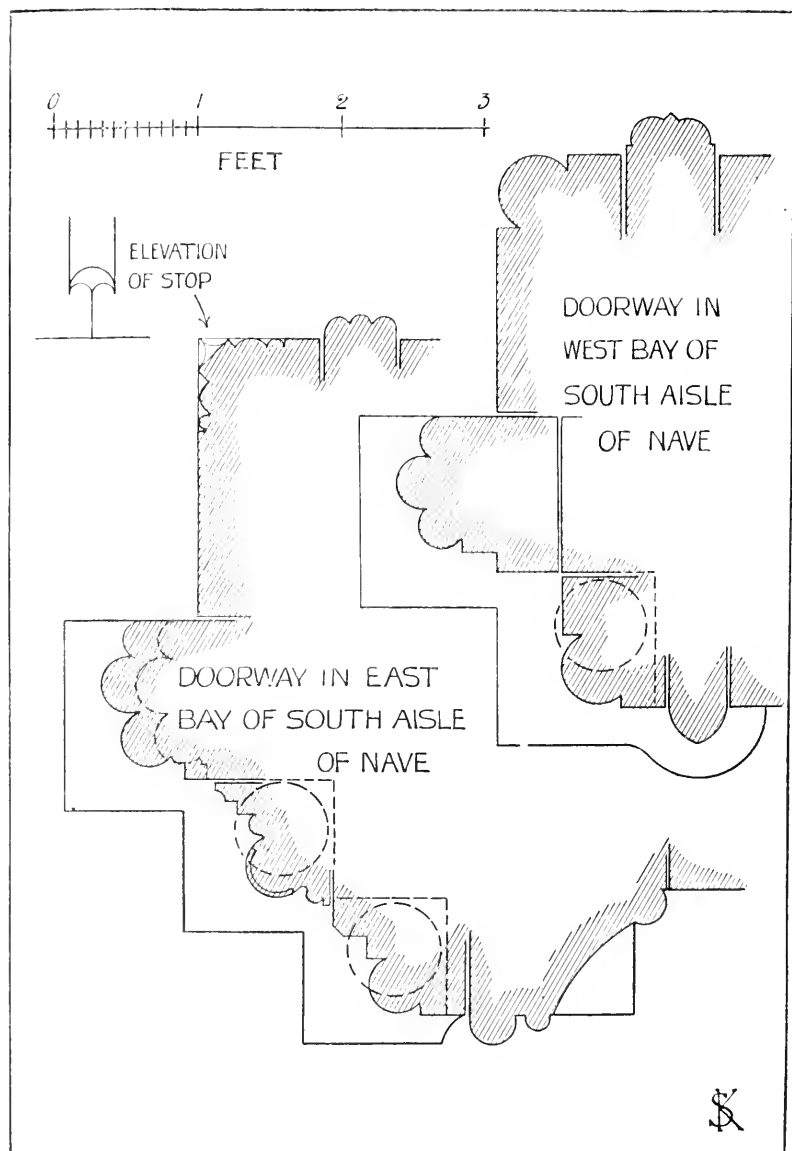
all the capitals in the church at Kirkstall are of the Romanesque type.

ARCHES. The mouldings of the arches, with the exception of those of the doorways, are generally confined to simple roll profiles. The arch of the sedilia on the south side of the presbytery has a simple angle-roll (fig. 72). The eastern arch of the crossing has a large angle-roll, a double chamfered member, and a small roll. In the northern and southern arches of the crossing, the two inner orders have the same profiles as the piers, precisely as in the arches opening into the chapels of the transept (fig. 72), but with an unmoulded outer order. In the western arch of the crossing, the inner order has a large half-roll flanked by a flat on each side, and the outer order has an angle-roll (fig. 81). The little semi-circular arches of the triforium at the south end of the south transept have a half-roll flanked by a hollow (fig. 67). The arch from the north transept to the north aisle has an unmoulded outer order, and an inner order of a roll flanked by chevrons on each side (fig. 84)—the only case of zigzag ornament inside the church. The arches of the nave arcades (fig. 72) have an inner order moulded like the transverse ribs of the aisle vaults, a second order chamfered, and an outer order with an angle-roll. At Fountains, the nave arcades have a large roll between two chamfered orders.

DOORWAYS. The four doorways of the nave are treated less simply. All have had monolithic jamb-shafts, with the inner order of the jamb composed of three small attached shafts, except in the west doorway where an angle fillet is substituted for the little central shaft. Mr. Kitson's drawings of the arch profiles (figs. 93, 94, and 95)¹ render any detailed description unnecessary. The inner order in each case repeats the profile of the attached shafts below, and the triple roll occurs also in the outer orders of the north and west doorways. The north and west doorways each have an order ornamented with the chevron. The jambs and arch of the north doorway are framed by a fret composed of a single roll. In the south-east, south-west, and west doorways, part of the plinth moulding is carried up the jambs, and continued over the arch as a hood moulding. In the west doorway, the second order shows a slightly more advanced profile than the others—a quirked roll between two hollows—which occurs also as the second order of the chapter-house doorway.¹ The internal arches of all four doorways are moulded, the mouldings being continued down the jambs. The internal hood-moulds of the north and west doorways are pointed rolls, a profile which also occurs in the

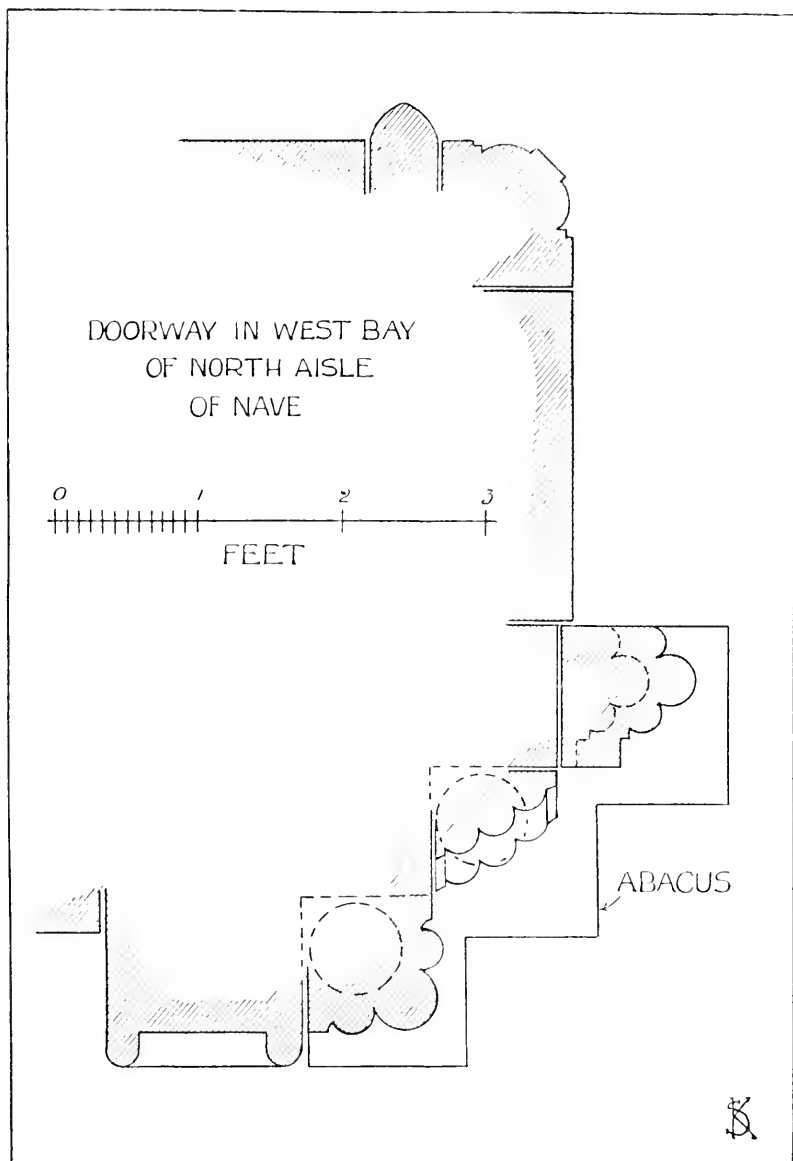
1. See also for the south-east doorway figs. 22 and 88; for the south-west doorway figs. 87 and 89; for the north doorway figs. 16 and 90; and for the west doorway figs. 15 and 91.

1. Also on the inside of the narthex arcade at Fountains, and, in a rather more elaborate form, in the three innermost orders of the west doorway there.



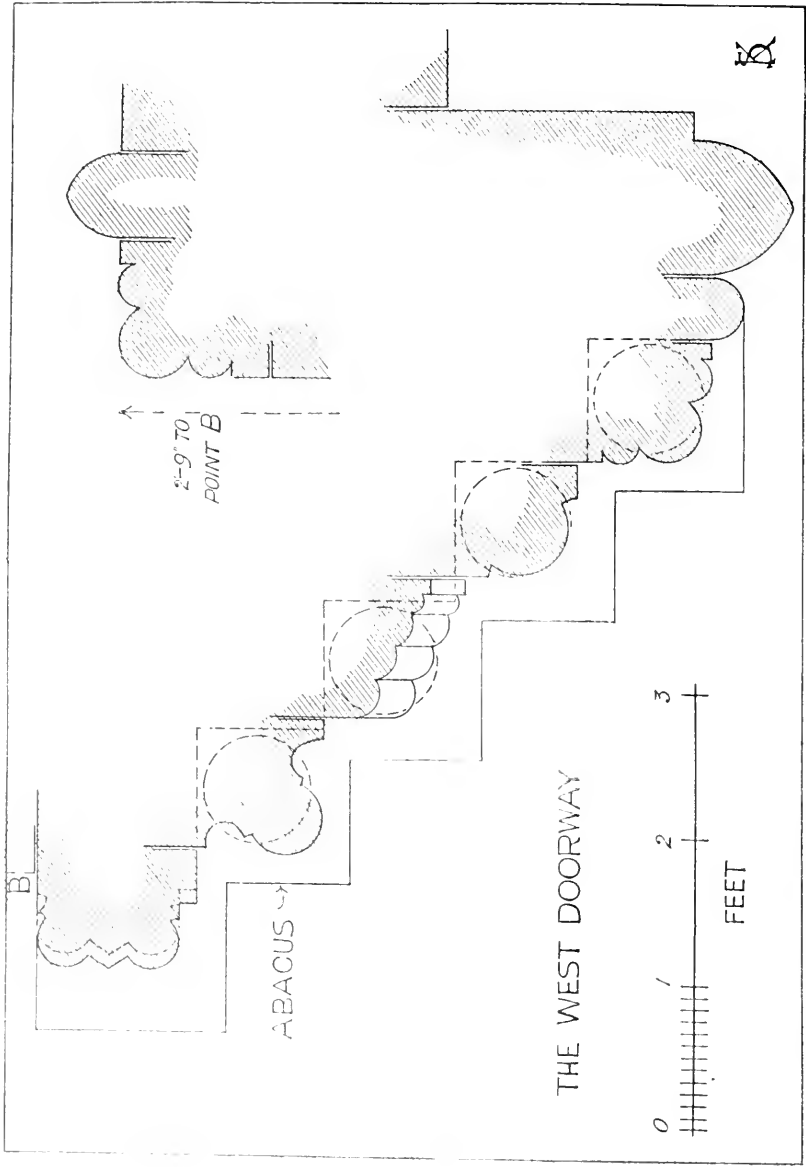
Measured and drawn by Sydney D. Kitson.

Fig. 93. Details of arches of south doorways.



Measured and drawn by Sydney D. Kitson.

Fig. 94. Details of arch of north doorway.



Measured and drawn by Sydney D. Kitson.
Fig. 95. Detail of arch of west doorway.

outer shafts under the gable-mould of the west doorway.

WINDOWS. The windows generally are very simply treated with a chamfer on the external jambs continued round the arch, and with wide splays internally. The windows of the clearstories on the west side of the transept and on both sides of the nave, which have monolithic jamb shafts externally, have an outer order of a single roll (without hood-mould), and inner chamfered jambs and arches. The two windows at the west end of the nave, which also have had external jamb shafts, have arches of two moulded orders; the inner order has an angle-roll, and the outer order a triple-roll, of which the larger middle roll is pointed, a profile which also occurs in the outer order of the chapter-house doorway.¹ The internal arches of these windows, unlike all others in the church, are moulded (fig. 69).

PLINTHS. The external plinths are three courses in depth, the lower of which is chamfered, the middle has a long weathering, and the upper a roll continued on the top by a hollow to the wall-face (fig. 72). The plinth at Buildwas has almost precisely the same profile.²

STRINGS. The string courses are, for the most part (as at Fountains), simply chamfered on their upper and lower edges (fig. 72). The internal string on the east wall of the presbytery has a bead between a straight upper chamfer and a hollow lower chamfer (fig. 72); this string is continued on the south wall and forms a hood-mould to the piscina (fig. 3). The string under the side windows of the presbytery consists of a simple roll. The lower string on the outside of the west front has a bead between a hollow upper chamfer and a straight lower chamfer (fig. 72).

HOODS. Where the windows have hood-moulds, they are usually chamfered on both edges, continuing impost-strings of the same profile. The windows generally have internal hood-moulds, except those of the presbytery and aisles of the nave,³ which have none. The arches of the crossing, transept chapels, and nave arcades also have double-chamfered hood-moulds (fig. 72). The hood-mould to the arch of the sedilia on the south side of the presbytery (figs. 5 and 72) and that to the internal arch of the south-east doorway have two rows of billets, one on either side of a small roll. The hood-mould to the internal arch of the south-west doorway has also two rows of billets, but the member between them is a small angular fillet. The hood-moulds to the external arches of the two windows at the west end of the nave are profiled with a flat face, a quirk, and a chamfer, and the

1. This profile also occurs in the doorways of the chapter-house and parlour at Fountains.

2. J. Potter, *op. cit.* pl. v.

3. The aisle windows at Fountains have internal hood-moulds.

latter is ornamented with a series of convex rosettes ; the terminations of these hoods are carved with the heads of bears or bulls.

EAVES The walls generally are finished externally below the
CORBELS. roofs with a row of corbels between the pilaster buttresses. To the middle chapel of the north transept, these corbels carried little semicircular arches. Elsewhere than to the transept chapels, the corbels seem to have supported a horizontal table, chamfered on its lower edge, though in many places the evidence has been obscured by loss, or by later alterations. The walls of the central tower, at the top of their original height, are finished by similar corbel-tables (figs. 12 and 61), as also is the gallery inside the west windows of the nave (fig. 69). The corbels generally consist of a short length of roll moulding, placed horizontally, sometimes quite plain, like the corbels to the gables of the transept chapels and to the west gallery at Fountains, but sometimes the rolls have a fillet above and below them, joined by a hollow in which the rolls are set, and frequently the faces of the rolls are ornamented. Some have a flat fillet or strap around the middle of the roll, or a cord lozengewise across the roll. In others a triple roll is substituted for the single large roll, and some of these have a fillet, or two reeds, across the rolls. Others have a triple roll set upright, following the convex profile of the corbel. It will be observed that all these motives are simpler than the heads and grotesques which usually ornament the eaves corbels in the Anglo-Norman Romanesque.

In spite of the many points of likeness between the churches of Fountains and Kirkstall which have been noted above, the similarity in the details of the two churches is not, I think, so close as to warrant the opinion that the same master-masons worked at the two abbeys, and this is improbable on other grounds. Although Fountains was begun several years before Kirkstall, the works at Kirkstall were carried on much more rapidly, and the church and buildings around the cloister were finished long before the completion of the monastic buildings at Fountains.

CONCLUSION.

In this attempt to analyze the architecture of the church at Kirkstall, one of my principal objects has been to determine precisely what influences contributed to form its architectural manner. My conclusions may be summed up in a few concluding words.

First as to what is Cistercian. The plan of the church follows the type developed by the Cistercians in Burgundy, and carried abroad

by them wherever their influence extended. In construction, the pointed barrel vaults over the transept chapels, and the use of the pointed arch for the principal arches of construction, are characteristically Cistercian. The general simplicity of the design is due, of course, to the ideas which were the very *raison d'être* of the order. Some characteristics which, although not unknown to the Anglo-Norman school, may be attributed to Cistercian influence are the absence of the triforium, and the use of the circular window and the relieving arch. The corbel-support is a Cistercian motive translated into Anglo-Norman terms of expression.

With these exceptions, the architecture is entirely Anglo-Norman. Even the system of vaulting employed in the presbytery and aisles of the nave may possibly be considered to be Anglo-Norman, modified by the Cistercian use of the pointed arch. The details throughout are purely in the Anglo-Norman manner, and even those features which have been noticed as Cistercian are expressed in the native architectural language. It is only in those parts of the church which were built last of all (upper part of west front and north clearstory of nave) that we find any trace of details which may be attributed to foreign influence.

The general expression of the architecture of Kirkstall, then, is that of the Anglo-Norman Romanesque, but Kirkstall is evidently one of the latest Cistercian churches of which this can be said. Roche must have been begun somewhere about the time that the church at Kirkstall was finished, and at Roche the expression is just as truly Gothic as that of Kirkstall is Romanesque, and this is true of the slightly later Byland. I speak here of what one may call the facial expression of the buildings, for the constructive development which was the essence of what we call Gothic lies behind Kirkstall. To what cause are we to attribute the striking difference between Kirkstall and Roche? It is true that the same development was in progress everywhere, but it can scarcely be doubted that the development in England was greatly accelerated by the influence of the wonderfully powerful and rapidly advancing school of the Ile-de-France—influence exercised, I believe, for the most part by way of Normandy. It was not indeed a case of the wholesale importation of a foreign style, such as the Cistercian importations from Burgundy into Germany and Italy. English architecture in the middle of the twelfth century was too strong to admit of the possibility of this. Nevertheless the analogies between the architecture of England and Normandy in the second half of the twelfth century are most striking, and there cannot be the slightest doubt that the latter was influenced by the Ile-de-France, as I believe the former also was, in a less degree. There is perhaps no more difficult

question in the study of mediaeval architecture than this question of the influence of one school, or one district, on another, and it is often very easy to mistake mere analogies for influence. We must remember, too, what was perhaps the most important factor, the universality of the mediaeval Church, which knew no bounds of nationality. In the case of the Cistercians, one possible way by which such influence could be exercised is obvious. Richard, the abbot of Fountains who died in 1170, was a native of York who had been abbot of Vauclair and precentor of Clairvaux, and his career may well represent that of some of the brethren over whom he ruled. In the eastern range of Fountains, there are some interesting bits of detail which seem to me to indicate that, if the mason, possibly a lay brother, who worked them was an Englishman, he was one who had travelled abroad. At Kirkstall, however, there is but little trace of anything of the kind. The church seems to have been built by native craftsmen, working in their native manner, and the specially Cistercian characteristics which have been noticed were doubtless dictated to them by those who had the general oversight of their work.

Nowhere in England had the Cistercian reform a greater measure of success than in Yorkshire, and nowhere was the influence of its architecture so considerable. Not that this influence was exercised so much in the direction of the spread of Burgundian motives of design, as was the case, for example, in Germany and Italy, for towards the close of the twelfth century the architecture of the Cistercians in England was gradually losing its specially Cistercian characteristics. But its influence was exercised rather by permeating architecture with something of that simplicity and restraint which was essentially the spirit of Cistercian building from the beginning. Its first severity gradually disappeared, but not before it had administered a powerful check to the somewhat redundant ornamentation of the later Romanesque. Two buildings erected by archbishop Roger of Pont l'Evêque (1154-1181) illustrate this point. What remains of his choir of York Minster shows the rich ornamentation of the time at its best, while the surviving parts of his work at Ripon have much in common with the severe beauty of Cistercian Roche. So the sober and restrained spirit of Cistercian architecture spread northward, and over the border into Scotland, and it is due in no small measure to its influence that the eastern parts of Fountains, Rievaulx, and Beverley are distinguished by a purity of design which was rarely equalled and never surpassed in the thirteenth-century architecture of northern England.¹

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INDEX.

(Cistercian foundations are distinguished by an asterisk.)

- Abbot's lodging, 5, 34-38, 35*n*, 42, 69.
 *Acey (Jura, France), 89.
 Achard, master of the novices at Clairvaux, 81.
 Adel, 9.
 Aire, river, 8.
 Aisles, 18, 110, 111, 117.
 *Alcobaça (Portugal), 99.
 Alexander, abbot, 2, 3, 4, 5, 83, 84.
 Alexander, abbot of Meaux, 54*n*.
 Almy, 49.
 Altars, 11, 12, 13, 14, 19, 20, 21, 38, 93*n*, 97*n*, 99, 99*n*, 100.
 Altar, High, 11, 12, 85.
 *Altenberg (Germany), 100.
 *Alvastra (Sweden), 90, 91*n*, 104.
 Ambulatory plan, 87, 94, 95, 95*n*, 96, 97, 98.
 Anglo-Norman school, 74, 82, 101, 104, 112, 115, 119, 122, 123, 123*n*, 126, 127, 139.
 Analysis of the architecture of the church, 138.
Apologia, St. Bernard's, 79.
 Apsidal chapels, 86, 86*n*, 88, 90, 91, 98, 99.
 Arcade of cloister, 27, 84, 132.
 — of nave, 17, 106, 110, 124, 128, 130, 133.
 — (west door), 22, 106.
 Architectural influences at Kirkstall, 121, 138, 140.
 Armley, 3.
 *Arnsburg (Hesse), 97*n*.
 Arthington, 5.
 Arthington Priory (Yorkshire), 5.
 Ashton, Peter, 6.
 Bakehouse, 63.
 Barnoldswick (Yorks.), 2, 3, 4, 64.
 Barrel vaults, 10, 12-14, 29, 32, 33, 102-104, 117.
 Barrow hole, 46*n*.
 Bases, 17-21, 32, 84*n*, 126, 126*n*, 127.
 *Beaulieu (Hants.), 29, 43, 58, 99.
 Belfry, 5, 16.
 Bells, 6, 78.
 Benedict, St. 76.
 Benedict XII, pope, 48.
 Benedictines and Benedictine rule, 29, 84, 91.
 Bernard, St., 75, 76, 79, 81, 82, 85*n*, 88, 92, 101, 115.
 Beverley (Yorks.), 141.
 Bezold, G. von, 82, 86, 86*n*.
 Bible, Harding's, 78*n*.
 *Bindon (Dorset), 89*n*, 91, 91*n*.
 Blood letting, 38.
 *Bonlieu (Creuse, France), 78*n*.
 *Bonmont (Switzerland), 91, 91*n*, 104.
 *Bonport (Eure, France), 99, 115*n*.
 Book closet, 14, 29, 31.
 Boundary and description of precinct, 8, 10.
 Bovile, Francis, 7.
 Bowllatt, J. B., senr., 56.
 Bowllatt's painting of the Abbey, 56-59.
 *Boyle (Ireland), 90, 91*n*.
 Brakspear, Harold, 52, 86*n*, 87.
 Bramley, 7.
 *Breuil-Benoît (Eure, France), 99, 116, 121*n*.
 Brewery, 59.
 Bridlington (Yorks.), 133*n*.
 Brissart, P., 96*n*.
 *Bronnbach (Germany), 91, 91*n*.
 Browne, Edward, 6.
 Browne, John, prior, 5.
 Brudenell, Francis and Frances, 7.
 Brun, Michael de, abbot of Meaux, 20*n*.
 *Buildwas (Salop), 19*n*, 20*n*, 88*n*, 91, 102, 104, 104*n*, 105, 106, 110, 111, 115, 117*n*, 126, 131, 137.
 Burghley, Lord, 6.
 Burgundy and Burgundian school of architecture, 74, 75, 82, 88, 88*n*, 99, 101, 102, 104, 106, 115, 121, 121*n*, 139, 140.
 Burton, abbot of Meaux, 54*n*.
 *Bussière, La, (Côte-d'Or, France), 89.
 Buttresses, 16, 21, 22, 24, 25, 38, 111, 113, 115, 138.
 *Byland (Yorks.), 1, 22, 23*n*, 24*n*, 58, 95, 97, 99, 99*n*, 110, 113, 117*n*, 131, 132, 133, 139.
Camera, 35, 35*n*, 40, 43, 69.
 Camock, William, 6.
 Canterbury (Kent), 20, 38, 41, 43, 106*n*.
 Capitals of pillars, 13, 14, 17, 32, 110, 127-33, 128*n*, 130*n*, 132*n*.
 *Cappel (Switzerland), 90, 91*n*.
 Cardigan, Earl of, 7.
 Carlisle, 46.
Carta Caritatis, 76*n*, 77.
 *Casamari (Italy), 93.
 Cecil, Sir Thomas, 6.

- Ceilings, 14, 104.
 — and vaults in Cistercian churches, 102, 104.
 Cellarer's building (*cellarium*), 4, 54-59, 88*n*.
 Cemetery, 30, 67.
 *Chaaïs (Oise, France), 99.
 Chapels, 5, 11, 12, 13, 19, 20, 21, 24, 38, 40, 43, 84*n*, 85, 87, 88, 89, 91*n*, 91-100, 106, 110, 129.
 —, increase in number of, 92.
 Chapter house, 4, 5, 29-31, 67, 121, 137.
 Chapter house, vaulting, 29, 29*n*, 84*n*, 119, 121.
 Chard, abbot of Ford, 55*n*.
 Châteaumeillant (Cher, France), 88*n*.
 Châtillon-sur-Seine (Côte-d'Or, France), 88*n*.
 *Cherlieu (Haute-Saône, France), 99.
 *Chiaravalle, near Milan (Italy), 90, 91*n*.
 *Chiaravalle di Castagnola (Italy), 90, 91*n*.
 *Chiaravalle della Colomba (Italy), 94.
 Christchurch (Canterbury), 43*n*.
 Church, 3, 5, 10-29, 64, 101.
 —, design and structure, 101.
 —, exterior features, 21.
 —, interior features, 10-21.
 —, north side, 22.
 —, plan, Cistercian, 85.
 —, west front, 21, 116.
 Cistercian architecture, 74, 75, 121*n*.
 — art, 78, 79, 81.
 — abbeys, numbers of, 76, 85.
 — buildings, uniformity of plan, 82, 84, 85, 87, 93, 99, 100, 110.
 — characteristics, 24*n*, 101.
 — churches, plans of, 87-89.
 —, style of, 74.
 —, plans of earliest, 83, 84.
 — and Cistercian influence, 74, 76, 82, 86*n*, 102, 105, 140.
 — in England, 76, 83.
 — order, foundation of, 74.
 — pointed arch, use of, 123.
 — rules and regulations, 15, 28, 34, 38, 46, 47, 52, 54, 76, 81, 90.
 *Cîteaux (Côte-d'Or, France), 58, 75, 83, 84, 85*n*, 87, 88*n*, 93, 94*n*, 96, 96*n*, 97, 98, 99, 100, 105.
 *Clairvaux (Aube, France), 1, 19*n*, 20*n*, 23*n*, 48, 58, 76, 78, 85, 87, 88, 88*n*, 92, 92*n*, 93, 93*n*, 94, 95, 96, 98, 99, 99*n*, 101, 105, 113, 115, 121.
 Clerestory and clerestory windows, 14, 17, 23, 24, 25, 27, 84*n*, 111, 130, 131, 137.
 *Clermont (Mayenne, France), 89, 91*n*.
 Cloister, 4, 5, 27, 53, 67, 121, 132.
 Cluny, and Cluniac school, 74, 79, 86, 86*n*.
 Cluny (Saône-et-Loire, France), 79*n*, 80*n*, 86, 93*n*.
 Coffins, stone, 30.
 Collège des Bernardines, Paris, 91*n*.
 Conduit, 43.
 Coney, John, 32*n*.
 Construction, date and order of, 1, 64, 83, 84.
Consuetudines, 19, 28, 28*n*, 34, 38, 54, 76*n*.
 Cookridge, 9.
 Corbels and corbel tables, 11, 15, 16, 17, 18, 23, 24, 25, 30, 32, 37, 45, 51, 58, 84*n*, 111, 117, 124, 125, 126, 127, 130, 132*n*, 138.
 *Cour-Dieu, La (Loiret, France), 93, 94.
 Cranmer, Archbishop, 6.
 Cranmer, Thomas and Katherine, 6.
 Credence and credence table, 11, 12, 13.
 Cresset, 57.
 Crosses, 77, 78.
 Crossing, 4, 12, 14, 105, 124, 133.
 *Croxden (Staffordshire), 35*n*, 54*n*, 100.
 Cruets, hollow for, 12.
 Cupboard and locker, 11, 12, 13, 29, 37, 44*n*, 46, 49, 51, 56*n*, 57.
 Darcy, Sir Henry, 6.
 Dates and order of construction, 1, 4, 64, 83, 84*n*, 101.
 Dehio, G., 82, 86, 86*n*.
 Dighton, John, junr., 7.
 Dimensions, comparative, of Fontenay and Kirkstall, 88*n*.
 Dismantlement and unroofing, 7, 64.
 Dommartin (Pas-de-Calais, France), 99*n*.
 Doorways, 14, 15, 18, 23, 24*n*, 29, 30, 32, 33, 130, 131, 133, 137.
 — in nave, 18, 27, 133.
 Doorway, north, 23, 106, 133.
 —, west, 21, 83*n*, 106, 116, 133.
 *Dore (Herefordshire), 88*n*, 89, 91*n*, 95, 97.
 Dorter and rere-dorter, 3, 4, 14, 30-32.
 —, derivation of word, 31*n*.
 — of lay-brothers, 3.
 Dorter, monks', 3, 4, 31, 68.
 — sub-vault, 4, 32, 33.
 Drains, 11, 13, 19, 32, 33, 35*n*, 40-42, 49, 59, 60, 61*n*, 62, 63, 70.
 Driffeld, Roger, abbot of Meaux, 35*n*.
 Driffeld, William of, abbot of Meaux, 20*n*.
 Dringhoe, William of, abbot of Meaux, 35*n*.
 Downing, Edmund, 6.
 Durham cathedral, 106, 111*n*, 122, 123*n*.
 Eaves, 138.
 *Eberbach (Germany), 90, 91*n*.
 *Ebrach (Bavaria), 97, 100*n*.
 Elizabeth, Queen, 6.
 Ely (Cambridgeshire), 41, 130*n*.
 Embattled parapet, 22, 24, 25, 27.

- English Cistercian churches, 74.
 ——— mediæval architecture, second half 12th century, 73.
 Erection, date and order, 1, 64, 83, 84, 101.
 Everard, bishop of Norwich, 88.
 Eugenius III, pope, 88.
Exordium Cisterciensis Coenobii, 76, 77*n*
- Fariat, B., 96*n*.
 *Ferté, La (Saône-et-Loire, France), 75, 89, 91.
 Fireplaces, 23, 29, 33, 35, 37, 39, 40, 41, 42, 45, 49, 50, 51, 52, 60-62.
 *Fontaine-Guérard (Eure, France), 115.
 *Fontenay (Côte-d'Or, France), 88, 88*n*, 89, 89*n*, 91*n*, 99, 101, 102, 104, 105, 105*n*, 106, 113*n*, 115*n*, 117, 121.
 *Fontfroide (Aude, France), 90, 91*n*, 105.
 Ford, 55*n*.
 *Fossanova (Italy), 90, 91*n*, 105*n*, 113.
 *Fountains (Yorks.), 1, 2, 16*n*, 20*n*, 22, 23, 29, 29*n*, 35*n*, 38, 40, 41, 42*n*, 43, 48, 51, 52, 55, 58, 60, 69, 74, 83, 87, 88, 91*n*, 93, 97, 98, 99, 100, 101, 102, 104, 105, 106, 110, 111, 113, 116, 123, 123*n*, 126*n*, 127, 128, 130, 130*n*, 131, 132, 133, 133*n*, 137, 137*n*, 138, 140, 141.
 Frater, 3, 4, 46, 51-53, 70.
 ———, alterations of, 47, 48, 52.
 ———, Cistercian position of, 46, 52.
 ———, derivation of word, 4, 6*n*.
 ——— at Fountains, 52.
 ——— pulpit, 46.
 French influence on English architecture, 74, 123, 139.
 *Furness (Lanc.), 16*n*, 23, 24*n*, 53, 60, 86*n*, 89, 91*n*, 110.
- Galilee (north porch), 11, 23*n*, 60.
 Gallery, 14, 17, 18, 19, 35, 40, 42, 47, 116.
 Gatehouse, 5, 10.
 ———, changes in, 61.
 Gautier, bishop of Châlon, 85*n*.
 Gawyn, John, 6.
 Geoffrey of Aini, 81.
 *Georgenthal (Gotha), 91, 91*n*, 97.
 Gift of Abbey to the Leeds Corporation, 7.
 Girgenti (Sicily), 104.
 Gloucester, 110, 117*n*.
 Godfrey, abbot of Fontenay, 88.
 Gournay, Saint-Hildevert (Seine-Inférieure, France), 99*n*.
Gradus presbyterii, 12, 18.
 Grant of lands by Crown, 5.
 Guest house, 5, 23, 60-63.
 Garderobe, 34, 36, 37, 42, 60, 60*n*, 61, 61*n*.
- Hatch, serving, 46, 50, 51*n*.
 *Hautecombe (Savoie, France), 81*n*.
 *Hauterive (Switzerland), 90, 91*n*, 104.
 Hawkesworth Wood, 9.
 *Hayles (Gloucestershire), 55*n*, 95*n*, 100.
 Hayman, Peter, 6.
 Headingley, 7.
 Hell Hole Gill, 8.
 *Heisterbach (Germany), 99.
 History of the Abbey, 1-7.
 Hood-molds, 11, 12, 14, 17, 23, 24, 25, 28, 43, 46, 50, 51, 137, 137*n*.
 Horsforth, 9.
 Howton, William of, abbot of Meaux, 35*n*.
 *Huelgas, Las (Spain), 91*n*.
 Hugh, abbot of Meaux, 20*n*.
 Hugh, monk of Kirkstall, 1.
- Ile-de-France, school of architecture, 73, 121, 122, 123, 139.
 Image, 13, 19.
 Infirmary, 5, 38-43.
 ———, date of building, 38.
 ——— of lay-brothers, 60.
 Interlacing ornament, 11, 127, 128.
 Irvine, J. T., 7, 63.
- *Jervaulx (Yorks.), 1, 4, 20*n*, 24*n*, 29, 35*n*, 58, 60, 99.
- *Kirklees (Yorks.), 132*n*.
 Kirkstall Forge, 9.
 Kitchen, 4, 38, 52.
 ———, meat, 5, 49, 50.
 ———, old, 50, 51.
 Kneading trough, 63.
- Lacy, Henry de, 2, 3, 83.
 Ladder, 47.
 Lamp-niche, 36, 37.
 Lavatory, 5, 43, 45.
 Lavena, Hugh of, abbot of Meaux, 35.
 Lay-brothers, *status* of 54.
 Leeds, 1.
 Library, 29, 42.
 *Lilienfeld (Lower Austria), 97*n*.
 Lockers, 37, 44*n*, 56*n*, 57.
 *Loccum (Hanover), 91*n*.
 *Loc-Dieu (Aveyron, France), 91*n*.
 Lodging, abbot's, 5, 34-38, 42, 69.
 London, abbot of Croxden, 54*n*.
 *Longpont (Aisne, France), 100, 116.
 *Louth Park (Lincolnshire), 55, 89, 91*n*.
 *Lysa (Norway), 87, 91.
- Malmesbury (Wilts.), 123*n*.
 Malthouse, 53, 59.
 Marshall, William, abbot, 16.
 *Maulbronn (Germany), 90, 91*n*.
 Meat, eating of, 47, 48.
 ——— kitchen, 5, 48, 49.
 Meaux, abbots of, Alexander, Burton Thomas, Hugh and William, 54*n*.

- *Meaux (Yorks.), 20*n*, 29, 35*n*, 41, 54*n*, 56.
 Micklethwaite, J. T., F.S.A., 7, 8, 12, 81, 91, 116, 124.
 Milley, Dom, 92, 98*n*, 101.
 Mills and millpool, 8, 63.
Ministerium, 12, 13.
 Misericord, 48.
 Monks, *status* of, 20*n*, 54.
 *Mont-Sainte-Marie (Doubs, France), 89.
 *Moreuela (Spain), 100.
 *Morimond (Haute-Marne, France), 76.
 Muniment room, 45.
 Narthex, 99, 122, 133*n*, 137*n*.
 Nave, 5, 14, 16-21, 23, 110, 116.
 — aisles, 18, 20, 110-111, 117.
 — arcade, 17, 84*n*, 106, 110, 124, 128, 130, 133.
 — ceiling, 104.
 — roofs, 17, 22.
 — west end, 116.
 *Netley (Hampshire), 29, 99.
 *Noirlac (Cher, France), 89, 91*n*, 105, 113.
 Normandy and Norman influence, 73, 74, 104, 139.
 North, Colonel J. T., 7.
 Norwich, 113, 115, 117*n*.
 *Obasine (Corrèze, France), 78*n*, 90, 91*n*, 105*n*.
 Odo, Duke of Burgundy, 83.
 Ornamentation of church, characteristics of.
 — arches, 133.
 — bases, 126.
 — capitals, 127-133.
 — corbel supports, 125.
 — doorways, 133.
 — eaves corbels, 138.
 — hoods, 137.
 — piers, 124.
 — plinths, 137.
 — strings, 137.
 — windows, 137.
 Ovens, 37, 49, 50, 51, 59, 63.
 *Ourscamp (Oise, France), 94, 100, 115
 Painting by J. B. Bowllatt, 56-59.
 Parapets, embattled, 22, 24, 25, 27.
 Parlour, 4, 30, 56.
 Pavements, 59, 78, 80.
 Pentise, 23, 35*n*, 40, 41, 45, 50, 51, 58, 59.
 Peter, the Venerable, abbot of Cluny, 79.
 Peterborough (Northants.), 38, 41, 113, 115, 130*n*.
 *Pforta (Germany), 90, 91*n*.
 Pictures, prohibition of, 78, 80.
 Pillars or piers, *cellarium*, 55.
 —, chapel, 21, 124.
 —, chapter house, 30.
 —, crossing, 124.
 —, dorter sub-vault, 32.
 —, infirmary, 39.
 —, nave and aisles, 16, 19.
 —, nave arcades, 110, 124, 131.
 —, presbytery, 124.
 Pinnacles, 16, 17, 18, 22, 24, 25, 27.
 Piscina, 127.
 Plinths, 22, 137.
 *Poblet (Spain), 100.
 Pointed arch, 73, 106.
 Poitou, William of, 3.
 Porch, 21, 23, 23*n*, 39, 40, 43, 60, 61.
 *Pontigny (Yonne, France), 23*n*, 75, 78*n*, 85, 87, 94, 94*n*, 96, 98, 99, 101, 105, 106*n*, 113, 121.
 Presbytery, 4, 5, 10-12, 25, 64, 86*n*, 113, 117*n*.
 — roofs, 17.
 — vaulting, 11, 12, 104, 106, 111, 112, 117, 117*n*, 119, 121.
 — windows, 11, 113.
 Precinct, 8.
 *Preuilly (Seine-et-Marne, France), 113.
 Prinstet, Etienne, 96.
 Prison, 43.
 Privies, 40, 59, 60.
 Procession, Sunday, 18, 28*n*, 59.
Pulpitum, 18, 19, 20.
 *Quincy (Yonne, France), 99.
 Quire, 12.
 — of lay-brothers, 20*n*, 54.
 — of monks, 18.
 — of novices, 18.
 —, retro, 19.
 Raynard, abbot of Citeaux, 77.
 Raynard of Montbard, 88.
 Removal from Barnoldswick, 3.
 Report and operations for preservation, 7, 64.
 Reredos, 11, 21, 38.
 Rere-dorter, 4, 32.
 Respond piers, 16, 17.
 Retro-quire, 19.
 Ribbed vaults, 11, 29, 29*n*, 30, 55, 104, 104*n*, 117, 117*n*, 119, 121, 121*n*, 122, 123*n*.
 Richard, abbot of Fountains, 2, 140.
 *Riddagshausen (Germany), 97.
 *Rievaulx (Yorks.), 1, 13, 20, 23*n*, 24*n*, 29*n*, 99, 141.
 Ripon (Yorks.), 140.
 Roadway through church, 25*n*.
 *Roche (Yorks.), 1, 29, 89, 91*n*, 93, 110, 131, 133, 139, 140.
 Roger of Pont l'Eveque, archbishop of York, 140.
 *Roma (Sweden), 90, 91*n*.
 Romsey (Hampshire), 95*n*.

- Roofs, 5, 15, 18, 22, 23*n*, 24, 31, 32, 37, 47, 56, 58, 59, 98, 111, 117.
 Rood and rood screen, 19, 20, 20*n*, 28*n*.
 St. Albans (Hertfordshire), 88*n*.
 St. Cross (Hampshire), 117*n*, 123*n*.
 Saint-Denis (Seine, France), 122.
 Saint-Etienne, Caen (Calvados, France), 115*n*.
 *Saint-Jean d'Aupt (Haute-Savoie, France), 110*n*.
 St. Mary's Abbey (York), 86, 87, 88*n*.
 Saint Mary's Mount, 2.
 Saint-Paul, Anthyme, 74, 110.
 Saint-Sever (Landes, France), 88*n*.
 Salley, manor, 6.
 Sandford, John, 6.
 *San Galgano (Italy), 82*n*, 93, 113.
 *San Martino, near Viterbo (Italy), 91, 91*n*, 94.
 *Santa-Maria d'Arbona (Italy), 90, 91*n*.
 *Santa-Maria di Falleri (Italy), 91, 91*n*.
 *Santas Creus (Spain), 90, 91*n*.
 *SS. Vincenzo ed Anastasio alle Tre Fontane, near Rome (Italy), 90.
 *Savigny (Manche, France), 53, 99.
 Savigny, order of, 86*n*, 89*n*, 91*n*.
 Savile, James, Earl of Sussex, 7.
 Savile, Sir Henry, 7.
 Savile, Sir Robert, 6.
 Scarborough, William of, abbot of Meaux, 41.
 Schepish, Richard de, abbot of Meaux, 35*n*.
 School, 41.
 Screens, 13, 18, 19, 20, 20*n*, 21, 35.
 Sculptures, prohibition of, 78.
 Seat, stone, 11, 13, 27, 30, 33, 35, 41.
 Sedilia, 11, 129, 130, 131, 133, 137.
 Selby (Yorks.), 1.
 *Senanque (Vaucluse, France), 90, 91, 91*n*.
 Sens, Saint-Savinien (Yonne, France) 86.
 *Sibton (Suffolk), 52.
 *Silvacane (Bouches-du-Rhône, France), 89, 91*n*, 113.
 *Silvanès (Aveyron, France), 89, 91*n*.
 Site, description of the, 3.
 Snice box, 63.
 *Sorø (Denmark), 90, 91*n*.
 Southwell (Notts.), 110, 113.
 Staircases and stairs, 13, 14, 31, 32, 35, 36, 37, 38, 42, 43, 45, 49, 57, 58, 59, 60, 61, 116.
 Stalls, 18, 20, 20*n*, 85*n*, 93.
 Statutes of the general chapters, 76*n*, 77.
 Steeping vat, 59.
 Steeple, 5, 7, 14, 16.
 ——— collapse of, 16.
 Steyning (Sussex), 130*n*, 131*n*.
 Stone and building, character of, 116, 132*n*.
 *Strata Florida (Cardiganshire), 89, 91*n*.
 String courses, 137.
 Surrender to the Crown, 5.
 Survey, monastic, 9.
 Tewkesbury (Gloucestershire), 110.
 Thomas, abbot of Meaux, 54*n*.
 *Thoronet (Var, France), 91, 91*n*.
 *Tintern (Monmouthshire), 20*n*, 23, 87, 99.
 Tiplady, William, 23*n*.
 Tower, 11, 15, 16, 16*n*, 65, 105. *See also* Steeple.
 Towers, prohibition of, 15, 78, 105.
 Transepts, 4, 5, 10, 12, 13, 16, 23-27, 29, 65, 77, 86*n*, 111, 115.
 Treasury, 31.
 Triforium, 110*n*, 130, 133.
 ——— absence of, 110.
 ——— and passage or wall gallery, 14, 110, 111.
 Turrets, 18, 22, 24, 25, 27, 29.
 Vacandard, E., 92.
 *Valle Crucis (Denbighshire), 89, 91*n*.
 *Varnhem (Sweden), 99.
 *Vandclair (Aisne, France), 115.
 Vault ribs in presbytery, 106.
 Vaulting, 10, 11, 12, 13, 14, 18, 20, 29, 29*n*, 30, 32, 32*n*, 33, 45, 51, 55, 73, 82, 84*n*, 102-104, 106, 111, 112, 117, 117*n*, 121, 122, 123, 123*n*.
 ———, *cellarium*, 55, 84*n*, 119.
 ———, chapter house, 29, 29*n*, 84*n*, 119, 121.
 ———, cloister buildings, 119.
 ———, dorter and dorter sub-vault, 30, 32, 32*n*, 84*n*, 121.
 ———, English development of, 117.
 ———, nave aisles, 18, 104, 104*n*, 111, 117, 119, 121, 123*n*.
 ———, presbytery, 11, 12, 104, 106, 111, 112, 117, 117*n*, 119, 121.
 ———, transept chapels, 13, 104, 119.
 ———, warming house, 45.
 Vaults, construction of, 119.
 *Vaux-de-Cernay (Seine-et-Oise, France), 80*n*, 87*n*, 91*n*, 113, 116*n*, 130*n*.
 Veil, Lenten, 12.
 *Veruela (Spain), 100.
 Vestry, 11, 13, 14.
 Vesper Gate and Lane, 8, 9.
 Vézelay (Yonne, France), 104, 121*n*.
 Vice, 12, 13, 14, 16, 22, 25, 42.
 *Viering (Carinthia), 82.
 *Villers (Belgium), 91, 93, 115.
 *Villers (Lorraine), 82.
 Viollet-le-Duc, 74.
 *Vitskøl (Denmark), 97*n*.
 *Walkenried (Germany), 82.
 Walter, Robert, 6.
 Wardell, John, 9.

Warming house, 43-46, 52, 70.

—— — vault, 31.

*Waverley (Surrey), 24*n*, 29*n*, 38, 41,
43, 48, 55, 60, 87, 91, 95.

*Wettingen (Switzerland), 90, 91*n*.

*Whalley (Lanc.), 58.

Windows, 137.

——, abbot's lodging, 37.

——, aisles and nave, 17, 18, 22, 116,
137.

——, chapel, 13.

——, chapter house, 29, 30.

——, circular, 17, 113, 116, 139.

——, clerestory, 23-27, 111, 137.

——, dorter, 31.

——, frater and kitchen, 49, 51, 53.

——, glazed, 78, 81.

——, presbytery, 11, 25, 25*n*, 113.

——, tower, 15, 16.

——, transepts, 13, 14, 24, 25, 115.

Wolfe, Reginald, 6.

York Minster, 140.

——, St. Mary's Abbey, 86, 87, 88*n*.

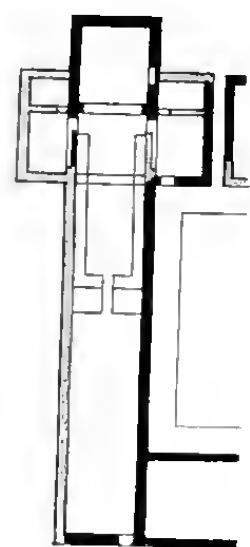
LIST OF ILLUSTRATIONS.

FIG.		PHOTOGRAPHED OR DRAWN BY.	PAGE
	HISTORICAL GROUND PLAN	—	
1	Kirkstall Abbey Church, from the north-west (before the recent repairs) ..	C. H. Bothamley	1
2	Kirkstall Abbey. Plan of the Precinct ..		1
3	Wall-drain south of high altar	Godfrey Bingley	11
4	Plan of wall-drain south of high altar ..	W. H. St. John Hope	11
5	Recess for the sedilia	A. Dawson Berry	12
6	Credence in presbytery, with later recess for cruets	Godfrey Bingley	12
7	East side of the interior of the north transept	Godfrey Bingley	12
8	Interior of the north transept, looking north	Godfrey Bingley	13
9	Doorway in transept, of night stair from dorter	Thomas Gascoigne	14
10	Interior of the south transept, looking south	Godfrey Bingley	14
11	Exterior of east end of vestry	C. H. Bothamley	15
12	East face of tower, showing limits of the Norman work and the line of the presbytery roofs	Godfrey Bingley	16
13	View looking eastwards up the church (before the late repairs)	F. Frith & Co., Ltd.	17
14	North-west corner of the nave	Thomas Gascoigne	20
15	West doorway of the nave (before the late repairs)	C. H. Bothamley	22
16	North doorway of the nave (before the late repairs)	Godfrey Bingley	23
17	The north transept, from the north-west	Godfrey Bingley	24
18	Original arrangement of the east front of the presbytery	W. H. St. John Hope	26
19	East front of the presbytery, showing traces of original windows (before the late repairs)	W. Sykes Ward	26
20	The church from the south-east (before the late repairs)	Joseph Wornakl	26
21	Fragments of the arcades of the twelfth century cloister	Godfrey Bingley	26
22	Eastern doorway from the cloister into the church	C. H. Bothamley	28
23	South transept and north-east corner of the cloister (before the late repairs) ..	F. Frith & Co., Ltd.	28
24	East side of cloister, showing chapter-house entrances, &c. (before the late repairs)	Godfrey Bingley	28
25	Interior of the chapter-house, looking west	Godfrey Bingley	28
26	Interior of the chapter-house, showing arrangements of the two vaults ..	Godfrey Bingley	28
27	Window of the chapter-house (exterior) ..	Godfrey Bingley	30
28	Remains of pillars and vaulting of the dorter sub-vault	Godfrey Bingley	32
29	Remains of vaulting of dorter sub-vault	Godfrey Bingley	33

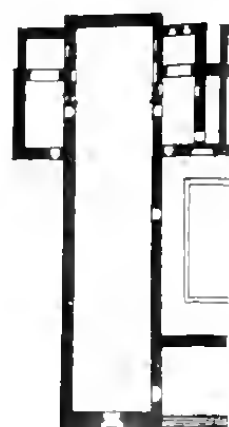
FIG.		PHOTOGRAPHED OR DRAWN BY.	PAGE
30	Drain of the monks' rere-dorter, looking east	C. H. Bothamley	34
31	Doorway of passage through south end of dorter sub-vault	H. Wormald	34
32	Original window and later doorways in passage at east end of dorter sub-vault	C. H. Allanson	34
33	Remains of the abbot's lodging, from the south-east (before the late repairs) . .	C. H. Bothamley	35
34	North-west corner of abbot's lodging (interior)	Godfrey Bingley	35
35	Fireplaces and openings in north wall of abbot's lodging	Isaac Howe	35
36	Window in abbot's lodging (interior) . .	Godfrey Bingley	36
37	Window of abbot's lodging (exterior) . .	Godfrey Bingley	36
38	Doorways in south-east corner of the cloister	C. H. Bothamley	44
39	North side of warming-house, showing original window sills, etc.	J. H. Radcliffe	45
40	Part of the remains of the lavatory, and frater and misericord doorways	Godfrey Bingley	46
41	North end of the frater and misericord, with doorways from cloister	Godfrey Bingley	46
42	Remains of west side of frater and misericord (before the late repairs) . .	C. H. Bothamley	47
43	Remains of east and west walls of frater and misericord (before the late repairs)	Godfrey Bingley	49
44	Original frater and kitchen doorways . .	C. H. Bothamley	50
45	Interior of the north wall of kitchen, showing first doorway from cloister and original frater doorway, and sills of early windows	Godfrey Bingley	51
46	Windows and traces of vaulting on the south side of the kitchen	Godfrey Bingley	51
47	Exterior of the kitchen, etc. from the south (before the late repairs)	C. H. Bothamley	53
48	Arches between the kitchen and the cellarer's building (before the late repairs)	C. H. Bothamley	53
49	Remains of the cellarer's building, looking north (before the late repairs)	Godfrey Bingley	55
50	Kirkstall Abbey from the west, before the fall of the steeple and the destruction of the west wall of the cellarium. From a painting by J. B. Bowllatt, Senr., in 1753	Godfrey Bingley	55
51	East side of cellarer's building, showing dorter door, etc.	C. R. H. Pickard	55
52	Part of east face of the cellarer's building, with doorway to the frater of the lay brothers	Godfrey Bingley	55
53	Western doorway from the cloisters into the church	C. H. Bothamley	57
54	Part of east face of east side of the cellarer's building (before the late repairs)	C. H. Bothamley	57
55	North side of the rere-dorter of the lay brothers	Isaac Howe	59
56	South side of presbytery, and part of east side of south transept (before the late repairs)	Godfrey Bingley	73
57	Fontenay, east end of church	Ph. des Forts	101

FIG.		PHOTOGRAPHED OR DRAWN BY.	PAGE
58	Fontenay, west end of church	Ph. des Forts	102
59	Fontenay, interior of church from south- west	Ph. des Forts	103
60	Pontigny, south side of church	J. V. Saunders	105
61	South face of the tower, with marks of transept roofs	Godfrey Bingley	106
62	East side of north transept, south chapel	Godfrey Bingley	106
63	Part external elevation of nave	Sharpe's <i>Parallels</i>	107
64	Part internal elevation of nave	Sharpe's <i>Parallels</i>	108
65	Section of nave and internal elevation of west end	Sharpe's <i>Parallels</i>	109
66	Part of the south arcade of the nave, look- ing east up the south aisle (showing pillars 5, 4, 3, 2 and 1)	Godfrey Bingley	111
67	Wall-passage in south transept	Godfrey Bingley	112
68	External elevation of west end	Sharpe's <i>Parallels</i>	114
69	North-west angle of nave	Godfrey Bingley	116
70	Vaulting of south aisle of nave, looking east	Godfrey Bingley	116
71	Vault of south aisle of nave	John Bilson	118
72	Details of mouldings	John Bilson	120
73	Pontigny, interior of church from south- west	C. Enlart	122
74	Arch from south transept to south aisle, now built up	Godfrey Bingley	124
75	Plans of nave piers	John Bilson	125
76	Vault corbel, north aisle of nave	J. V. Saunders	126
77	Vault corbel at south end of sub-vault of dorter	J. V. Saunders	126
78	Base mouldings of nave arcades	Sydney D. Kitson	127
79	Piscina in presbytery, west jamb	J. V. Saunders	126
80	Nave arcade, angle of base	J. W. Westmoreland	126
81	South-west crossing pier, corbel	J. T. Irvine	128
82	South transept, middle chapel, capital of north jamb	John Bilson	128
83	North transept, north chapel, capitals of north jamb	J. V. Saunders	128
84	Arch from north transept to north aisle, capital on south side	J. V. Saunders	128
85	North transept, south chapel, capitals of north jamb	J. V. Saunders	128
86	Nave arcade piers	Sharpe's <i>Parallels</i>	129
87	Western doorway from the cloister into the church	Godfrey Bingley	130
88	Eastern doorway from cloister to church, west jamb	J. V. Saunders	130
89	Western doorway from cloister to church, west jamb	J. V. Saunders	130
90	North doorway of nave, west jamb	J. V. Saunders	130
91	West doorway of nave, south jamb	J. V. Saunders	130
92	Details of cloister arcade (restored)	John Bilson	132
93	Details of arches of south doorways	Sydney D. Kitson	134
94	Detail of arch of north doorway	Sydney D. Kitson	135
95	Detail of arch of west doorway	Sydney D. Kitson	136
96	Comparative plans of Cistercian churches	John Bilson	—

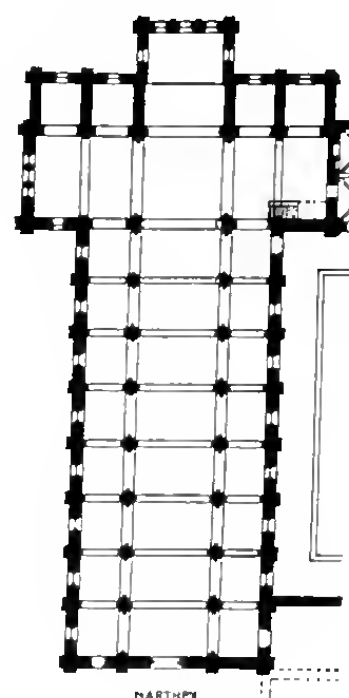
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LYSA

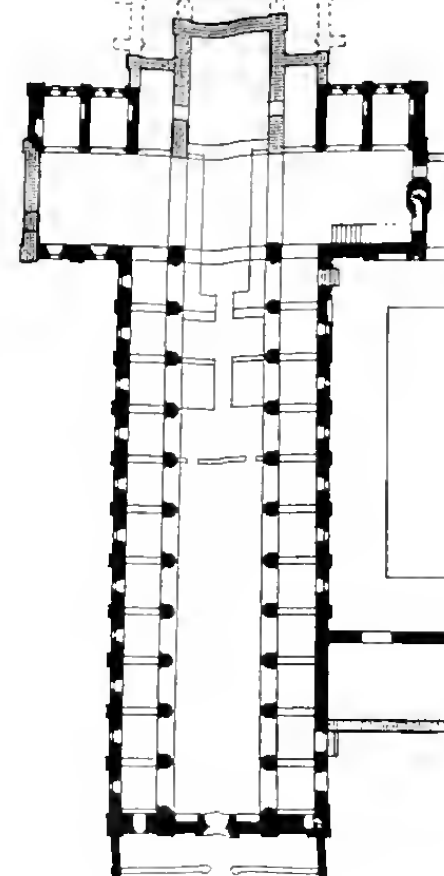


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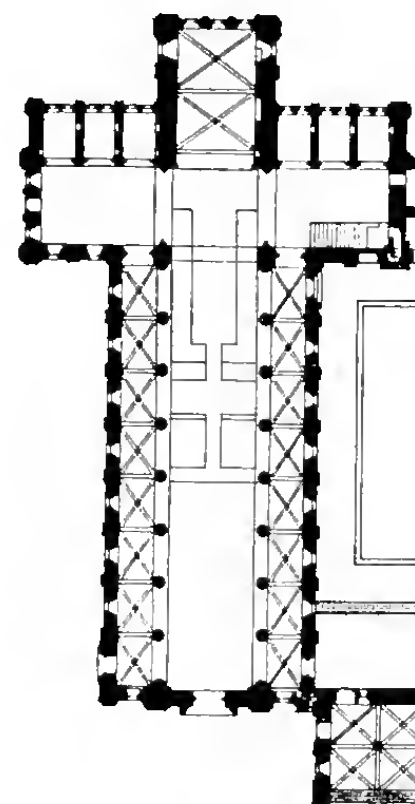


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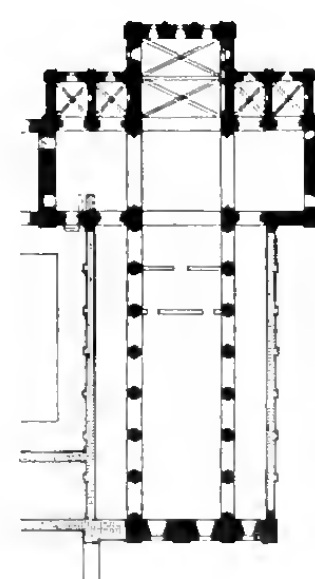
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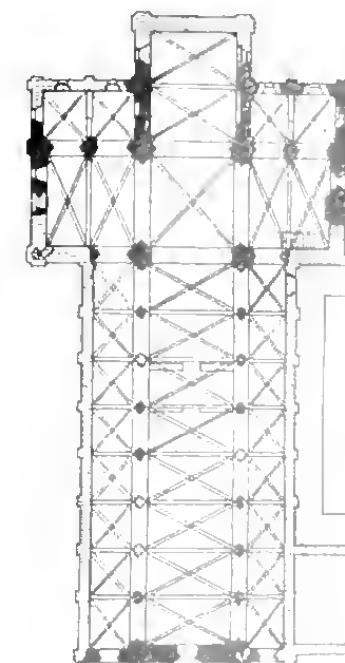
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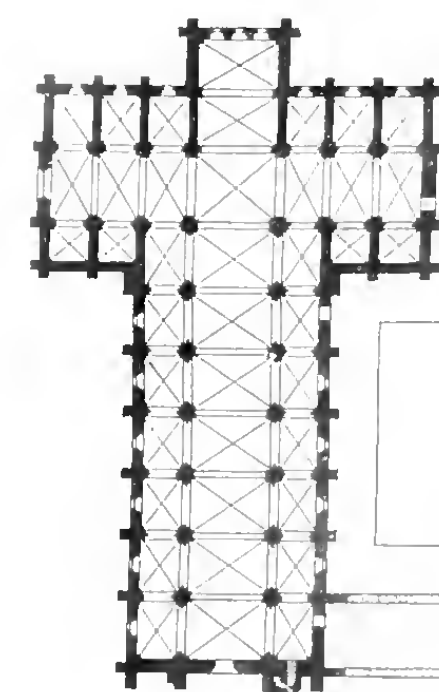
BUILDWAS



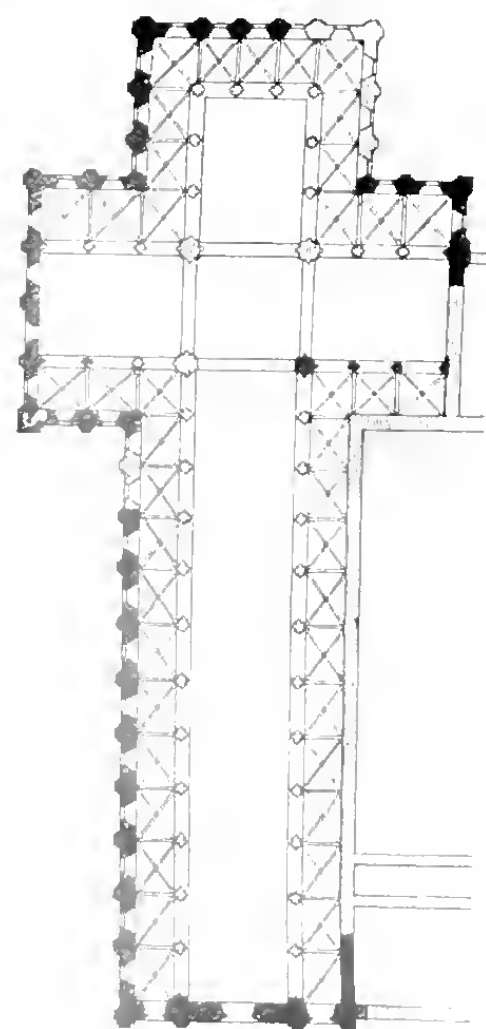
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LA COUR-DIEU

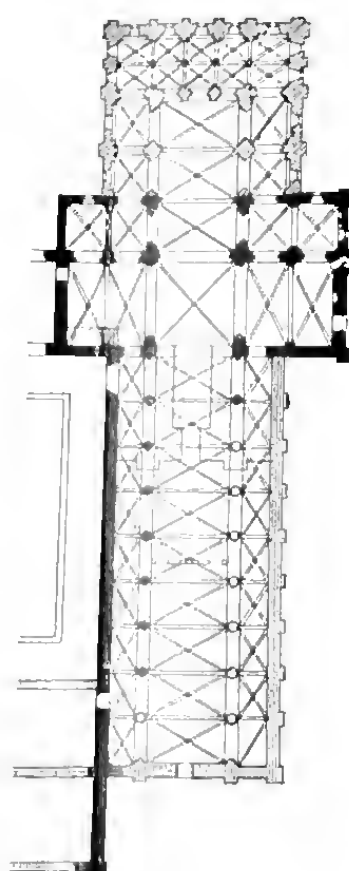


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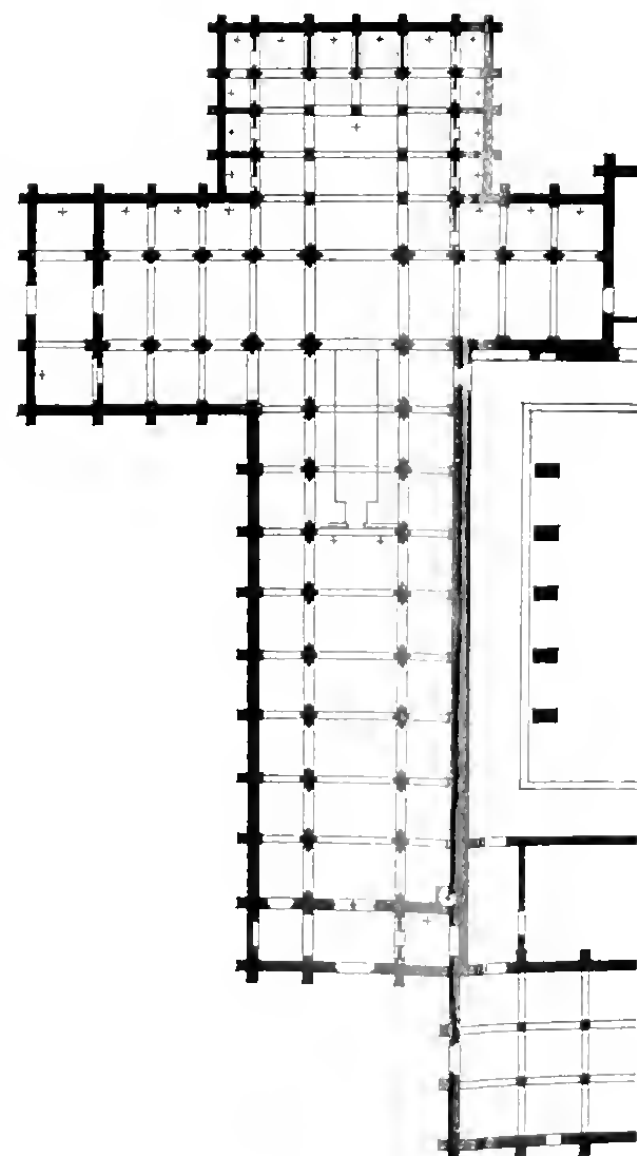


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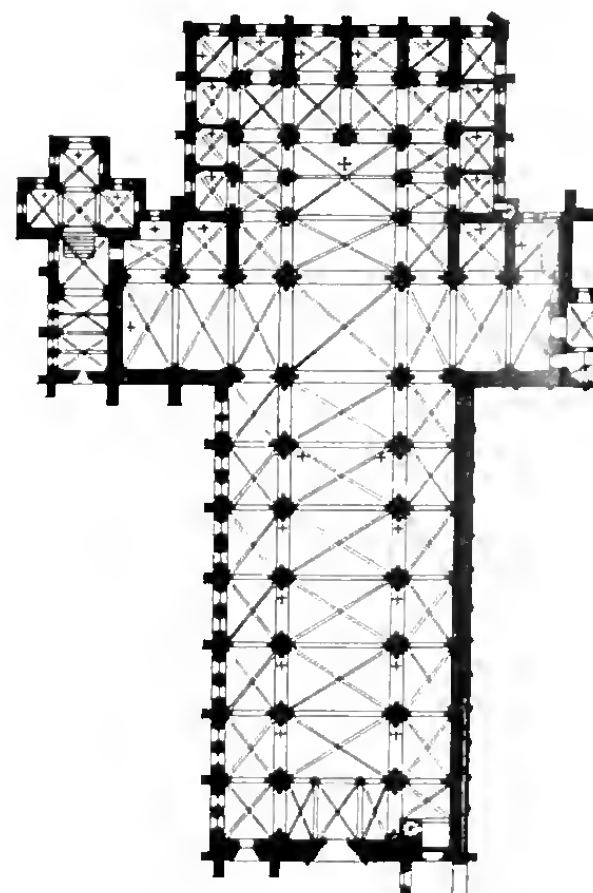
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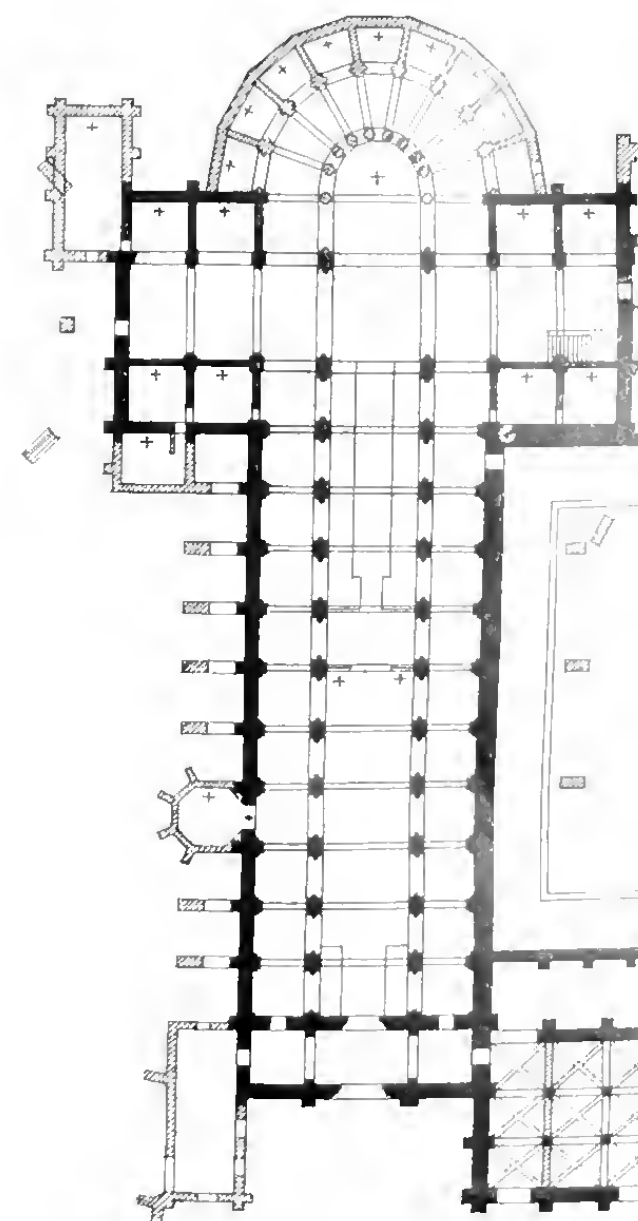
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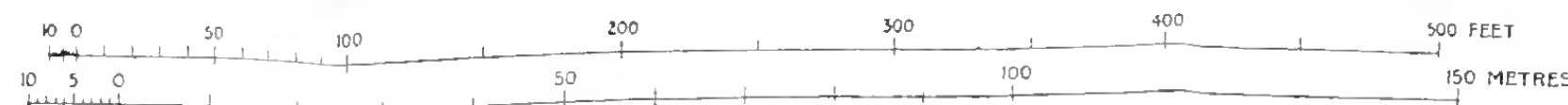
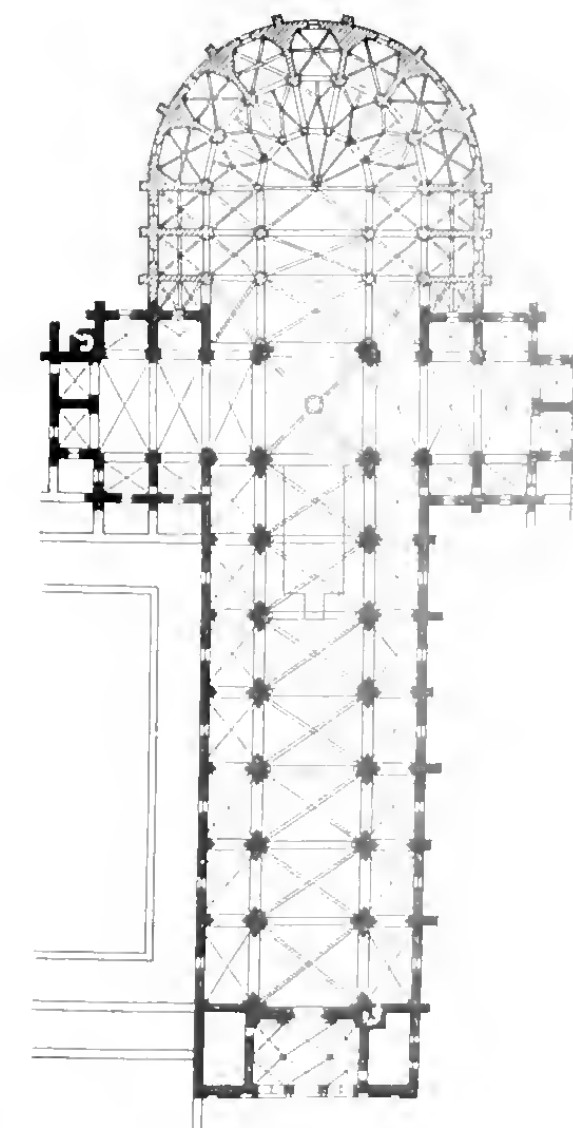


FIG. 96. COMPARATIVE PLANS OF CISTERCIAN CHURCHES.

Thoresby Society.

REPORT FOR 1907.

IN presenting their Report for the year 1907, being the 19th Annual Report since the Society's formation, the Council of the Thoresby Society have great pleasure in again being able to announce a steady increase in the list of members.

During the year, 27 annual members have joined the Society as against 4 life members and 34 annual members, the numbers for last year: but the losses by death and resignation have been fewer than was the case in the previous twelve months, so that at the end of 1907 the numbers on the roll were 70 life and 319 annual members, total 389, shewing a net increase in the membership of 10 (12 annual less 2 life) as against a net increase during the previous year of 11.

The Honorary Librarian and Curator reports the following accessions to the Society's Library and Collection during the year 1907:—

2 Photo Maps of Hunslet.

Presented by Mr. E. Kitson Clark, F.S.A.

Notes on the Private Tokens, their Issuers, etc. (part II.).

Presented by the Author, Mr. S. H. Hamer, Halifax.

Publications of the Halifax Antiquarian Society for 1906. 9 parts and Report and Index.

Presented by the Society.

9 Lantern Slides, Various.

Presented by Mr. E. Kitson Clark, F.S.A.

2 Mounted Photos shewing ancient pavement at Abbey House, Kirkstall.

Presented by Mr. Dickinson.

Cast of a Spindle-Whorl, found at Rodley, with a newspaper description thereof.

Presented by Mr. S. Margerison.

Portion of a Stained Glass Window from Osmondthorp Hall.

Presented by Mr. J. Stenson Webb, the lead framing and writing being done gratuitously by Mr. Wm. Pape. The footnote is by Mr. Westlake.

1 Vol. Dialect of Leeds, 1862.

3 „ Annals of Yorkshire, 1862 (Mayhall).

1 „ Mediæval Yorkshire, 1884 (Lamplough).

- 1 Vol. Places of Public Interest in the County of York, 1843
(Hargrove).
- 1 „ „Battles fought in Yorkshire,” by Dr. Leadman, F.S.A.
- 1 „ „Old Kingdom of Elmete.
- 6 „ „Etchings of the Streets of Leeds. by S. Wagstaffe.
Presented by Mr. Samuel Denison (Hon. Librarian).
- Catalogue of Coins sold at Ralph Thoresby’s sale in 1764.
Presented by the Rev. Robt. Collyer, D.D. (New York).
- 13 Vols. Transactions of the British Archæol. Association
(Exchanged).
- 4 Vols. Historical Manuscript Commission Publications.
Presented by Mr. Rowland Barran, M.P., Roundhay.
- 1 Vol. Military Antiquities.
- 1 Vol. Romans in North Britain.
Presented by Mr. G. A. Hobson, Richmond.
- 40 parts Hull Museum Publications.
Presented by Mr. Thos. Sheppard, F.G.S.

The Council appeal to the members for further generosity, and especially as regards books printed and published in Leeds.

The attention of members of the Society is drawn to the fact that the interesting collection of Books, Pamphlets, Engravings, etc., is always open to their inspection. The Housekeeper, Mrs. Wilson, is always on the premises except on Wednesday afternoons, and will willingly give any information or assistance.

The following excursions were made during the year :—

April 2nd, Middleham, Jervaulx Abbey, and Masham.

May 11, Kellington, Templehirst, and Drax (Mr. S. D. Kitson and Mr. E. K. Clark, guides).

July 3, Seamer, East Ayton, and Scarboro’ (jointly with the Yorkshire Archæological Society, Mr. W. Braithwaite, guide).

July 27, Grassington, Linton, Burnsall, and Appletreewick (Mr. E. K. Clark, guide).

One part only of the Society’s Publications has been issued to members of the Society during the year, viz., the second part of a volume of Miscellanea. It had been hoped that the second part of the Grammar School Register would have been issued, but unforeseen delays have arisen owing to the illness of the Editor, Col. Wilson. It is hoped, however, that this part will very shortly be completed.

The Volume for 1907, the Architectural History of Kirkstall Abbey, by Messrs. St. John Hope and Bilson, will probably be in the hands of members before this report is printed, so that they will have an opportunity of judging of the work themselves.

The Council may be excused if they congratulate the Society on the production of this volume, which they feel can rank with the best efforts of any antiquarian Society in the Country ; and they desire to express their thanks not only to the Authors, but to others who have co-operated with them. more especially to Messrs. Bingley and Lumb. whose help has been simply invaluable.

For the current year the Council propose to issue the " History of Barwick in Elmet." by the Rector, the Rev. F. S. Colman ; and for the year 1909. (1) Miscellanea, third part ; (2) A further instalment of the Leeds Parish Church Register.

KIRKSTALL ABBEY.

In connection with the issue of *The Architectural Description of Kirkstall Abbey*, the following donations have been received :—J. A. Brooke (£1 1s.), S. Denison (£2 2s.), J. C. Chambers (£1), Arthur Sykes (10s. 6d.), Col. J. W. R. Parker (£1 1s.), Joseph Scott (£2 2s.), Mrs. Tempest (£1), John Comber (10s. 6d.), A. L. Knight (£1 1s.), John Hepper (10s. 6d.), E. A. Brotherton (10s. 6d.), Miss Bulmer (£1 1s.), C. F. Tetley (£5 5s.), John Tweedale (£1 1s.), Col. T. W. Harding (£3 3s.), Mrs. Meredith (10s. 6d.), John Kirk (£1 1s.), J. C. Eckersley (£1 1s.), Francis Darwin (£2), F. Gott (10s. 6d.), Sir Thomas Brooke, Bart. (£3 3s.), A. Hawkyard (10s. 6d.), W. W. Richardson (£1 1s.), Rev. Canon N. E. Leigh (£4 4s.), J. E. Bedford (5s.), T. A. Whatmoor (5s.), B. P. Scattergood (£1 1s.), G. D. Lumb (£1 1s.).

The following members have paid for extra copies at 10s. 6d. each :—Arthur Kirk (1), John A. Brook (2), W. T. Crampton (2), S. Denison (2), S. D. Kitson (2), J. E. P. Turner (1), Rev. M. O. Hodson (1), J. C. Chambers (1), J. S. Lawson (2), Wm. Harvey (2), H. C. Embleton (2), Mrs. C. A. Oates (1), Arthur Sykes (1), W. Ferrand (2), Col. Parker (1), Joseph Scott (1), Mrs. Tempest (1), H. W. Peck (1), Robt. Armitage (2), J. H. Wilkinson (1), H. T. Kelsey (1), G. D. Lumb (6), W. S. Braithwaite (1), G. Dyson (1), Miss C. E. Bedford (1), Mrs. Warde-Aldam (1), Chas. Turner (1), Rowland Barran (1), John Hepper (1), E. A. Brotherton (3), Miss Bulmer (1), Miss Lucy Stables (4), John Tweedale (2), Dewsbury Public Library (1), C. W. Holroyd (1), J. C. Atkinson (1), Col. T. W. Harding (4), Wm. Wildblood (2), F. Gott (2), Sir Thos. Brooke (2), A. Hawkyard (1), Walter Rowley (1), W. W. Richardson (4), Rev. Canon Leigh (2), Robert Wilson (1), Thos. B. Pegler (1), J. E. Bedford (1), Mfd. Mattison (1), Fred Mitchell (2), Dr. N. Bodington (2), W. L. Ingle (2), F. Woodhead (1), J. H. Wicksteed (1), J. R. Ford (6), Dr. J. E. Eddison (2), W. A. Brigg (2), E. K. Clark (4), Chas. Croysdale (1), Rev. R. V. Taylor (1), W. A. Hobson (1), Legh Tolson (2), Rev. H. Stapleton (1), J. W. Morkill (2), W. T. Lancaster (3).

THE THORESBY SOCIETY.

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		£	s.	d.			£	s.	d.
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Subscriptions for 23 copies	12	1	6	Bradford Historical and Antiquarian Society Printing and Stationery :—			0 7 0	
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"Wardell's Antiquities of Leeds," 3 sold					Knight & Forster, Subscription Receipt Books		1 11 0		
Maps sold				Yorkshire Archaeological Society :—			3 15 1	
E. K. Clark, Excursions				Fifth Instalment in repayment of Loan		40 0 0		
Yorkshire Archaeological Society, Income					Interest on Loan for one year		33 6 1		
Tax allowed	1	11	5	Fire Premium on Contents		0 15 0		
Yorkshire Archaeological Society, Interest overpaid	0	5	5					
10, Park Street, share of income for year to 30th Nov., 1907, less £20 for rent									
Bank Interest for the year, less commission..									

G. D. Lumb, Postages, &c., 1905 and 1906	3	10	0
J. Wetherell, one Picture Frame	..	..	0 5 0
G. Richardson, Large Glass for View of Leeds	..	..	0 3 6
Eyre & Spottiswoode, Binding Manlove's Funeral Sermon	..	..	0 12 0
Spink & Thackray, Balance of Account	..	0	8 6
Balance in hand*	..	..	4 19 0
			149 11 5
			<u>£296 3 7</u>

*The publications for 1906 and 1907 have not been paid for, and may amount to £300.

G. D. LUMB, TREASURER.
23 March, 1908.

AUDITED 26th March, 1908. T. WALKER,
HERBERT DENISON.

CAPITAL ACCOUNT, 31st DECEMBER, 1907.

Dr.	LIABILITIES.	£	s.	d.	£	s.	d.	£	s.	d.
Yorkshire Archaeological Society Loan	..	1,000	0	0						
Less instalments paid	..	200	0	0						
					800	0	0			
Outstanding Accounts:—										
Publications for 1906 and 1907, say	..	300	0	0						
Printing, Stationery, &c.	..	10	0	0						
					310	0	0			
Life Fees, 1889 to 1907 (97)	..	509	5	0						
Less Life Members dead, 1889 to 1907 (27)	..	141	15	0						
					367	10	0			
Balance in favour of the Society* (in addition to Life Fees, £367 10s. 0d.)	..	195	1	5						
					£1,672	11	5			
								£1,672	11	5

*The value of the stock of publications, the contents of the Library, and the furniture, are not included. They have been valued for Fire Insurance at £660.

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